

Disney
THE ART OF
**RALPH
BREAKS
THE INTERNET**



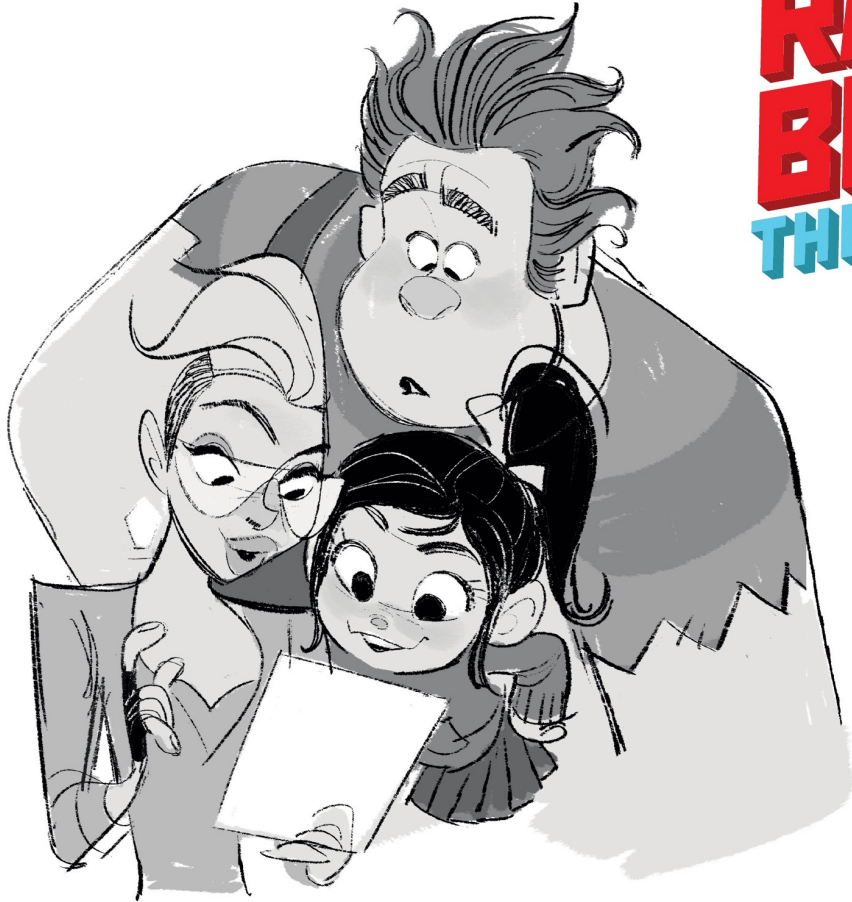


<Ami Thompson / digital>

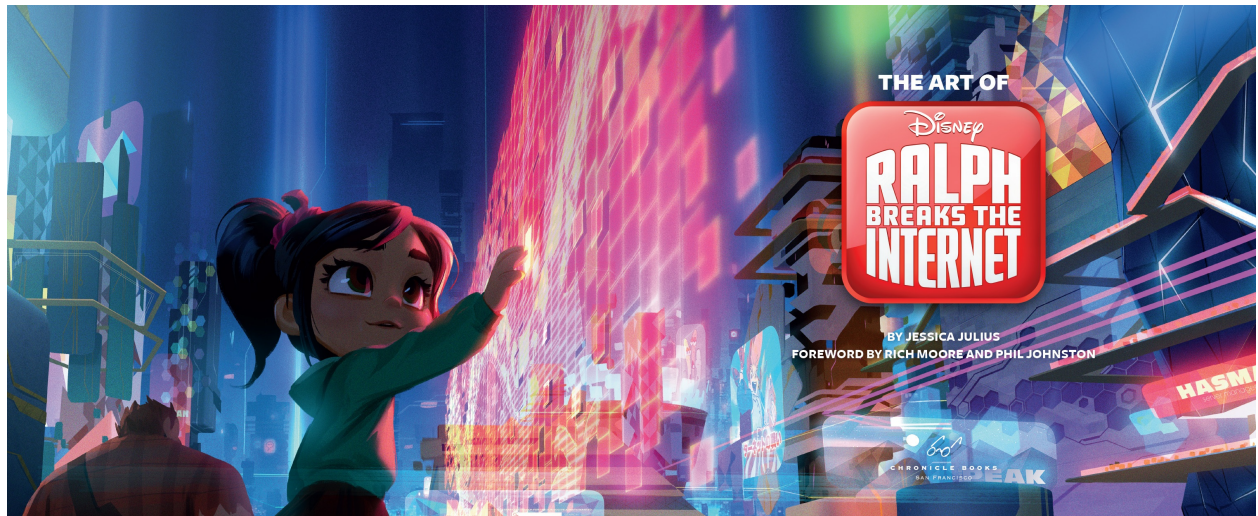


<Various Artists / digital>

Disney
THE ART OF
**RALPH
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THE INTERNET



<Ami Thompson / digital>



<Mingjue Helen Chen / digital>

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Creating a computer-generated animated film involves years of inspired collaboration. Before the final rendered images of *Ralph Breaks the Internet: Wreck-It Ralph 2* were seen on screens around the world, the following artists contributed their talents to the digital images included in this book:

Aaron Campbell, Adam Green, Adam Reed Levy, Adil Mustafabekov, Alberto Abril, Alena Wooten, Angela McBride, Avneet Kaur, Benjamin Min Huang, Brandon Lawless, Brendan Gottlieb, Bret Bays, Cesar Velazquez, Chadd Ferron, Chad Stubblefield, Chelsea Lavertu, Chris Anderson, Chris McKane, Christoffer Pedersen, Daniel Arata, Daniel James Klug, Dave

Christopher Pedersen, Daniel Arata, Daniel James King, Dave Hardin, Dave Komorowski, Dong Joo Byun, Dylan Ekren, Dylan Hoffman, Dylan VanWormer, Fawn Veerasunthorn, Foam Natnicha Laohachaiaroon, Garrett Eves, Gina Bradley, Gina Warr Lawes, Glen Claybrook, Hubert Leo, Ian Krebs-Smith, Isaak Fernandez, Jack Fulmer, Jared Reisweber, Jason Figliozi, Jason Hand, Jason Stellwag, Jay Jackson, Jennifer Downs, Jeremy Spears, Jesus Canal, Jim Reardon, Joaquin Baldwin, Johann Francois Coetzee Jon Krummel II, Jose L. Velasquez, Josie Trinidad, Justin Kern, Justin Sklar, Kate Kirby-O'Connell, Katherine Ipjian, Katie Fico, Kira Lehtomaki, Konrad Lightner, Larry Wu, Lauren MacMullan, Lissa Treiman, Luis Logam, Malcon Pierce, Mary Twohig, Matthew Schiller, Michael Anthony Navarro, Michael Talarico, Michelle Lee Robinson, Mitchell Counsell, Mo El-Ali, Nancy Kruse, Natalie Nourigat, Nathan Warner, Nicholas Burkard, Nicklas Puetz, Nicole Mitchell, Pamela Spertus, Paul Carman, Paula Goldstein, Qiao Wang, Reece Porter, Renato dos Anjos, Rich Fallat, Robert Huth, Ryan Tottle, Scott Kersavage, Sergi Caballer, Si-Hyung Kim, Simon Thelning, Stephen Ashby, Sylvia Hyo-Ji Lee, Timothy J. Richards, Tom Ellery, Tyler C. Bolyard, Vitor Vilela, Xinmin Zhao



<Matthias Lechner / digital>

FOREWORD by Rich Moore and Phil Johnston

INTRODUCTION: Ralph Breaks the Internet

OLD FRIENDS

THE INTERNET

NEW FRIENDS

CRASH OVERRIDE

ACKNOWLEDGMENTS

COLOR KEYS

FOREWORD



<Ami Thompson / digital>



Phil Johnston
Hey, we have to write this foreword.



Rich Moore

When?



Phil Johnston

Two days ago.



Rich Moore

Hmm. What's it supposed to be about?



Phil Johnston

Why we wanted to make the movie, *etc.* So why did you?



Rich Moore

I needed the money.



Phil Johnston

You realize this is going to be in the book?



Rich Moore

I was kidding. Jeez. Sarcasm gets lost in text, doesn't it?



Phil Johnston

Apparently. Anywho . . . Sequels are so often terrible. Do you remember how we decided to do this one?



Rich Moore

I remember when we first started talking about this, we knew we wanted to send Ralph and Vanellope to the Internet. Visualizing the world of the Internet was exciting to me from the get-go. It's never really been done in film, at least not on this scale. When Production Designer Cory Loftis and Art Directors Matthias Lechner and Ami Thompson first started showing us images of what the Internet might look like in this movie, I was blown away. The work they and the hundreds of artists working on this film did to make the Internet feel like a real world is nothing short of a miracle. So having that as the backdrop where our story takes place was a big part of the appeal to me.



Phil Johnston

Agreed. But saying you want to make a movie about the Internet is like saying you want to make a movie about New York City. There are millions of stories that could be told. So it took a LONG time to come up with the right story.



Rich Moore

True. At first, we were only thinking of the Internet as a way to expand Ralph's and Vanellope's world beyond the arcade. The idea got much juicier when we realized that it also had to be a place that would really test their friendship and make things especially difficult for Ralph.



Phil Johnston

For me, once we started thinking of Litwak's Arcade as a small town and the Internet as a big city, I had my way into the story emotionally. I grew up in a small town in Wisconsin and eventually left for the big city (I've lived in New York and Los Angeles for almost 20 years). So I started thinking about my relationship to the town where I grew up and the friends I knew there. many of whom

and the more I think about it, many of them still live there. Just because I left for something different and some of my friends decided to stay doesn't mean we aren't still friends. We are, despite the fact that our lives are very different. As a new character in the film says to Vanellope, "Friendships change, and the good ones grow stronger because of it." That's the essence of this movie to me.



Rich Moore

Cool. So I guess we should write this foreword now.



Phil Johnston

I think we just did.

INTRODUCTION: RALPH BREAKS THE INTERNET



<Mingjue Helen Chen / digital>



Hi, we're the team who made *Ralph Breaks the Internet*. Ask us anything!

PRODUCER / DIRECTOR / CREW

Producer—Clark Spencer

Directors—Rich Moore and Phil Johnston Production Designer—Cory Loftis

Art Director, Environments—Matthias Lechner Art Director,

Characters—Ami Thompson

Associate Production Designer—Mingjue Helen Chen Visual

Effects Supervisor—Scott Kersavage Technical Supervisor—Ernest Petti
Visual Development Artist—Mehrdad Isvandi Visual Development Artist—Jim Martin
Visual Development Artist—Kevin Nelson Visual Development Artist—Nick Orsi
Visual Development Artist—Mike Yamada
Director of Cinematography, Layout—Nathan Warner Head of Visual Effects—Cesar Velazquez Head of Animation—Kira Lehtomaki
Head of Animation—Renato dos Anjos
Director of Story—Jim Reardon
Head of Story—Josie Trinidad



[–] **Jessica Julius** Author What inspired you to make a sequel to *Wreck-It Ralph*?
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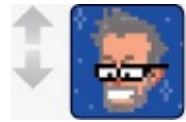


[–] **Rich Moore** Director I love the characters we created and wanted to do more with them. One of my favorite things is when you can keep building on characters and their relationships.
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[–] **Phil Johnston** Director The first movie is about two outsiders who find a genuine friendship with each other. We wanted to put pressure on Ralph and Vanellope's relationship, to push them somewhere new. And that meant expanding their world, which also presented an exciting artistic challenge.

[permalink](#) [embed](#) [parent](#)



[–] **Rich Moore** Director The first film was a love letter to 1980s video games. But a sequel had to be bigger, which allowed us to go beyond the arcade. The Internet seemed like the perfect place for us to go.

[permalink](#) [embed](#) [parent](#)



[–] **Phil Johnston** Director Once we landed on sending Ralph and Vanellope into the Internet, it opened up everything from an art and story perspective. Almost everyone alive today has some kind of relationship with the Internet, but it has never really been conceived of in this way, as a physical place one can go, with people who live there.

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[–] **Jessica Julius** Author What were the biggest challenges in creating this film?

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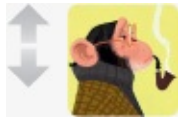
[–] **Scott Kersavage** Visual Effects Supervisor Just trying to define the Internet was the first challenge. We wanted to represent the perceptions of everyone who uses it, from those who remember when it was just a tiny network of universities to today's audiences who have grown up on it.

[permalink](#) [embed](#) [parent](#)



[–] **Matthias Lechner** Art Director, Environments Translating the abstractness of the Internet into a real environment. We had to take something familiar and depict it in a way that would give the audience a whole new experience.

[permalink](#) [embed](#) [parent](#)



[–] **Cory Loftis** Production Designer Designing a *Wreck-It Ralph* movie is like designing ten movies at once. Every game, every website, every new location has a different look and style, and new characters to go with it. When you add in the randomness and chaos of the Internet, the biggest challenge is keeping everything cohesive. The variety is fun but it has to feel like the same movie when you leave eBay to go to Slaughter Race.

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OLD FRIENDS



<Various Artists / digital>



[–] **Jessica Julius** Author *Wreck-It Ralph* was the story of two misfits who find friendship with each other. How did the Internet setting of the new film drive how you developed them and our other friends from the first film?

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[–] **Phil Johnston** Director We wanted to test Ralph and Vanellope's friendship, to throw stuff in their way to see if they could stay friends despite the obstacles. The Internet is so big and complicated that they and the other characters have to grow to meet its challenges.

[permalink](#) [embed](#) [parent](#)



[–] **Rich Moore** Director There is a lot of good and a lot of bad in the Internet. It's an environment that can be dangerous for a young person like Vanellope or for a person who is insecure the way Ralph is. Any wedge that could test their friendship exists in this world.

[permalink](#) [embed](#) [parent](#)



[–] **Jessica Julius** Author What design changes did you make to update the original characters for the new film?

[permalink](#) [embed](#)



[–] **Cory Loftis** Production Designer One advantage of a sequel is that Ralph, Vanellope, Felix, Calhoun, and their games were already designed. But *Wreck-It Ralph* was a long time ago in terms of filmmaking technology.

[permalink](#) [embed](#) [parent](#)



[–] **Scott Kersavage** Visual Effects Supervisor We had to update all the characters and environments to work with our new Hyperion renderer and rigging tools, yet make sure that the characters still look like themselves.

[permalink](#) [embed](#) [parent](#)



[–] **Cory Loftis** Production Designer With earlier technologies, skin can sometimes look gray, like there's no blood going through it. With Hyperion, the characters' skin feels alive.

[permalink](#) [embed](#) [parent](#)



[–] **Ami Thompson** Art Director, Characters All the characters got updates to their clothing and hair. There were a lot of seemingly small changes that add up to a richer, more believable feeling to the characters.

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<Ami Thompson / digital>

RALPH & VANELLOPE



[–] **Jessica Julius** Author What specific obstacles did the Internet allow you to throw in Ralph and Vanellope’s way in order to challenge their friendship?

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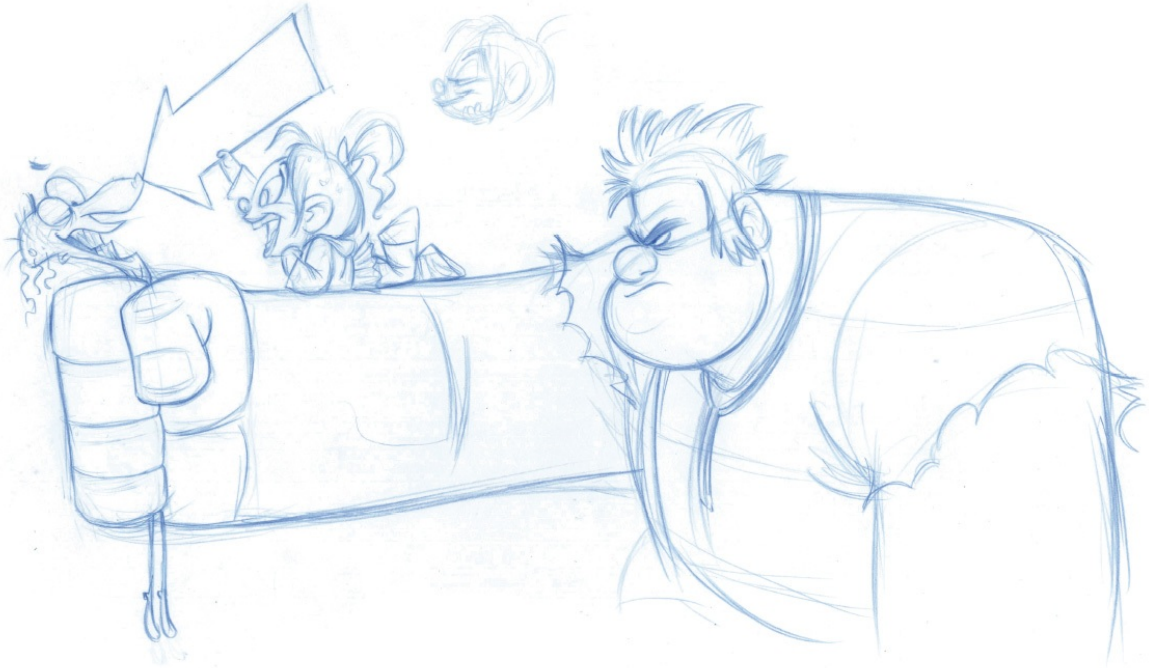
[–] **Rich Moore** Director When they get to the Internet, Ralph and Vanellope realize they want different things. And the people they meet in this new world reinforce their differences. That’s something that’s very true about the Internet; it’s a great connector but it can also be a divider.

[permalink](#) [embed](#) [parent](#)



[–] **Phil Johnston** Director The metaphor we used is two best friends from a small town who go to the big city and suddenly realize there is something else out there. They discover their different needs could potentially drive them apart. But ultimately, they learn that friendships can change and the good ones get better for it.

[permalink](#) [embed](#) [parent](#)



<Jeff Merghart / digital>



<Paul Felix / digital>



<Paul Felix / digital>



Renato dos Anjos  @HeadOfAnimation

The computer imposes limitations so we use draw-overs—hand-drawing on top of a computer image—to help animators push poses and get what we really want, so there is no restriction beyond our own imaginations. That hand-drawn sensibility is part of our Disney history but also something we still use every day.

 9

 13

 24



<Ami Thompson / digital>



Cory Loftis  @ProductionDesigner

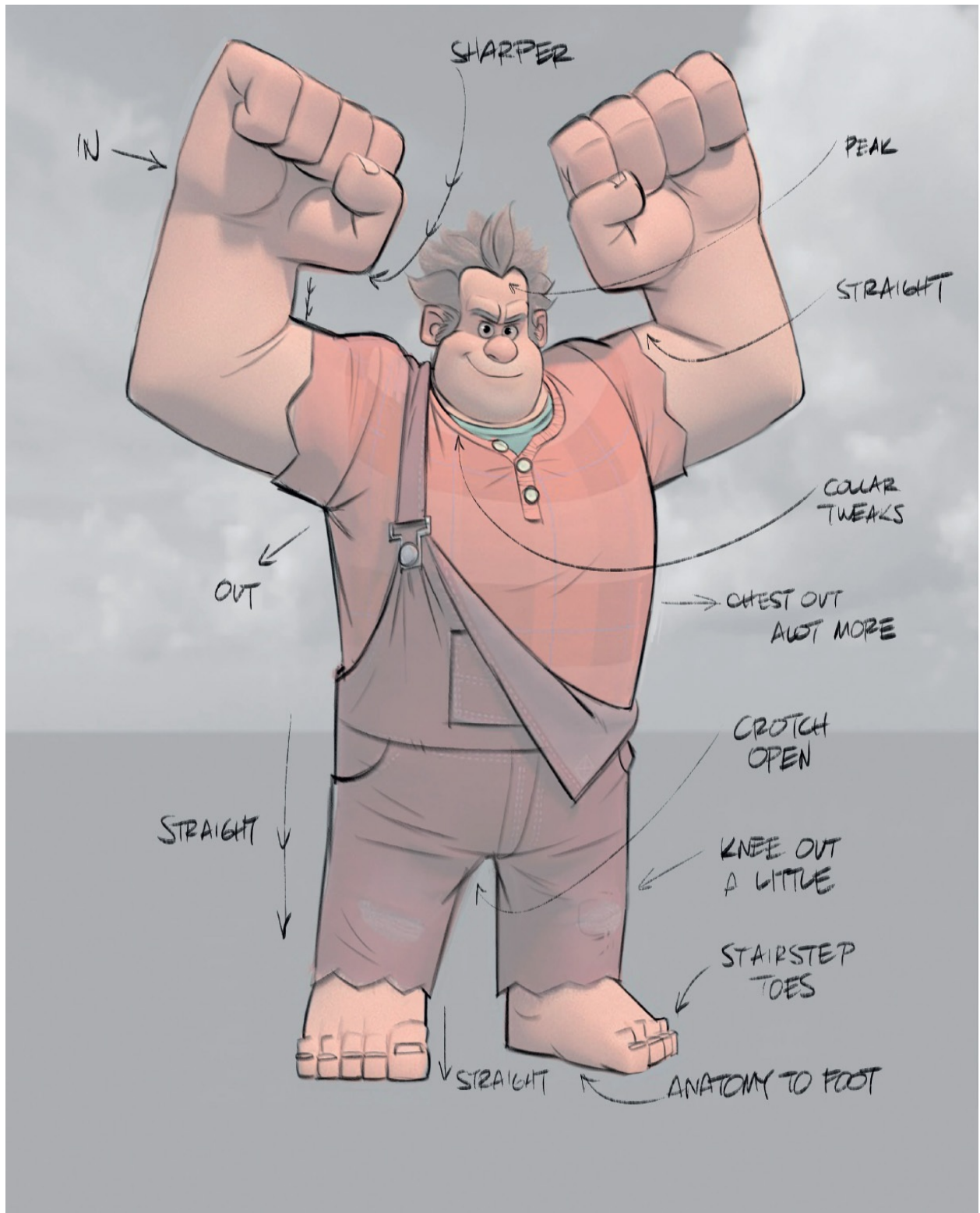


In the first film, the clothes seem almost plastic-y. For the sequel, we remade outfits to behave and look more like real cloth. Ralph's overalls and shirt wrinkle and slide as he moves, Vanellope's sleeves move up and down.

 6

 24

 31



<Cory Loftis / digital>



<Cory Loftis / digital>



<Paul Felix / digital>



<Ami Thompson / digital>



Cory Loftis ✓ @ProductionDesigner

In the first film, Vanellope's hair is in two parts: bangs and ponytail. Now her hair grows from the tip of her head to the end of her ponytail, so if you were to pull on her ponytail, it pulls her head too. It makes her so much more believable. She feels like a real little girl now.

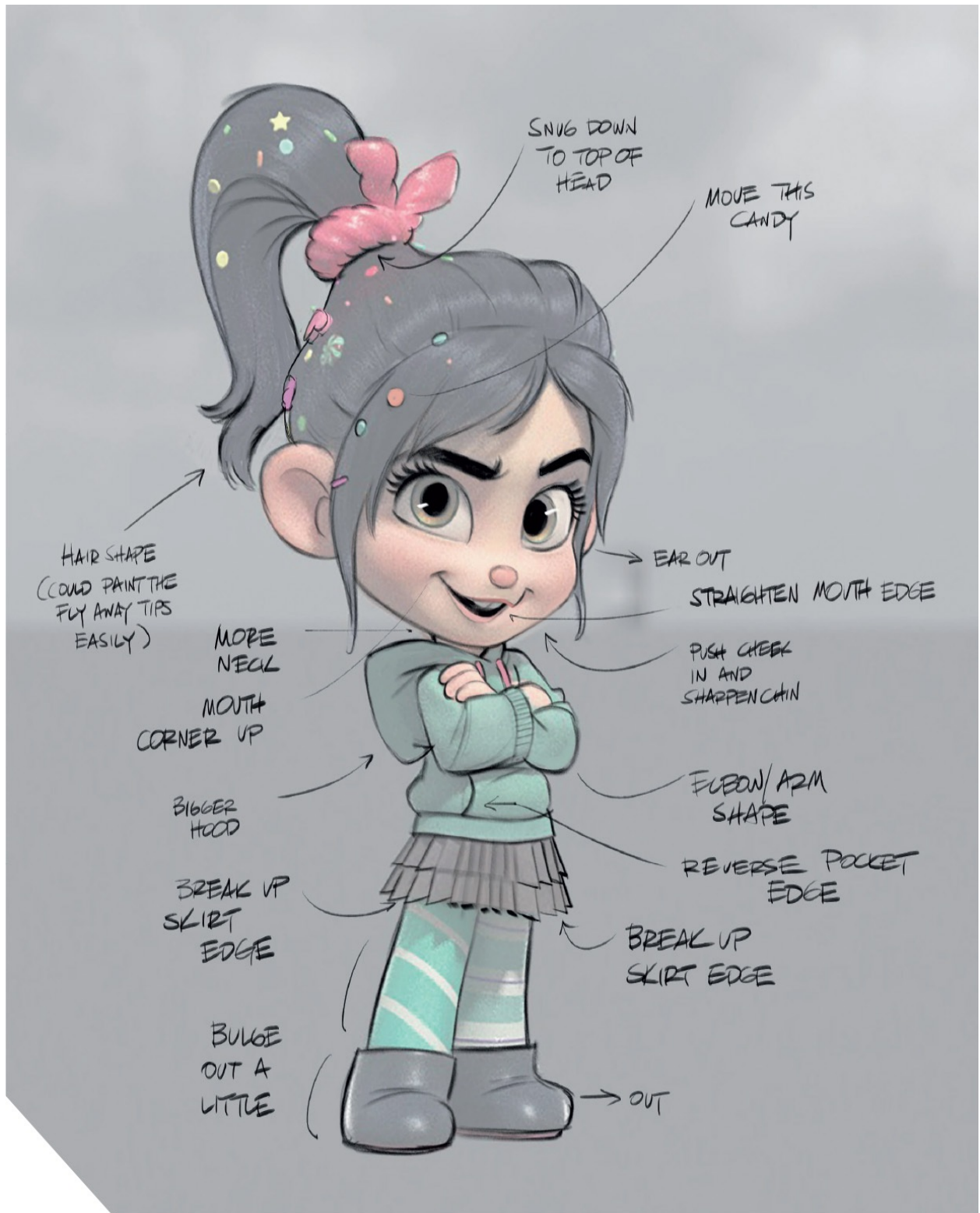
14

5

22



<Ami Thompson / digital>



<Cory Loftis / digital>



Ami Thompson  @ArtDirector_Characters



We redesigned Vanellope's hands. Her fingers are fatter and smoother, and the tips are rounder, which helps her feel more childlike.

 8

 16

 34

LITWAK'S ARCADE



[–] **Jessica Julius** Author *Ralph Breaks the Internet* begins with our old friends in Litwak's Arcade. What updates did you make to Mr. Litwak and the arcade?

[permalink](#) [embed](#)



[–] **Ami Thompson** Art Director, Characters Mr. Litwak is older—he has more white hair, more wrinkles—but he still loves the arcade.

[permalink](#) [embed](#) [parent](#)



[–] **Matthias Lechner** Art Director, Environments Like Litwak himself, the arcade has aged. It's six years older, so it's a little grungier. The main update is that he's installing a Wi-Fi router because he thinks having the Internet will bring in more customers.

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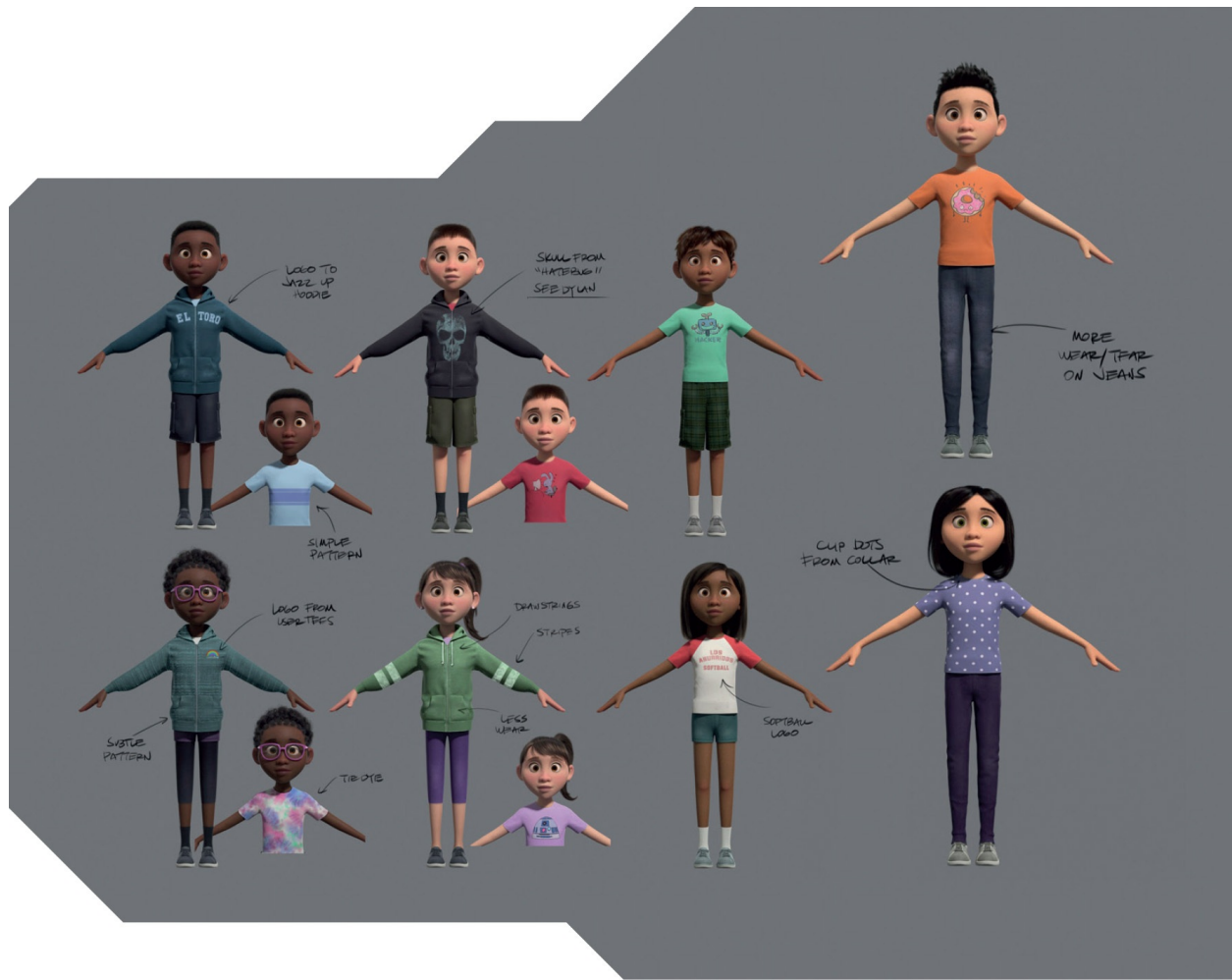
[–] **Cory Loftis** Production Designer Litwak is a reluctant and late adopter of the Internet. He's the king of archaic forms of technology. He pays in cash, doesn't have a cell phone, still buys a physical newspaper. That's reflected in his office, which

we had to design for this story since you don't see it in the first film. He has phone books, a landline, a slide projector. The computer is the one new thing in his office.

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<Ryan Lang / digital>



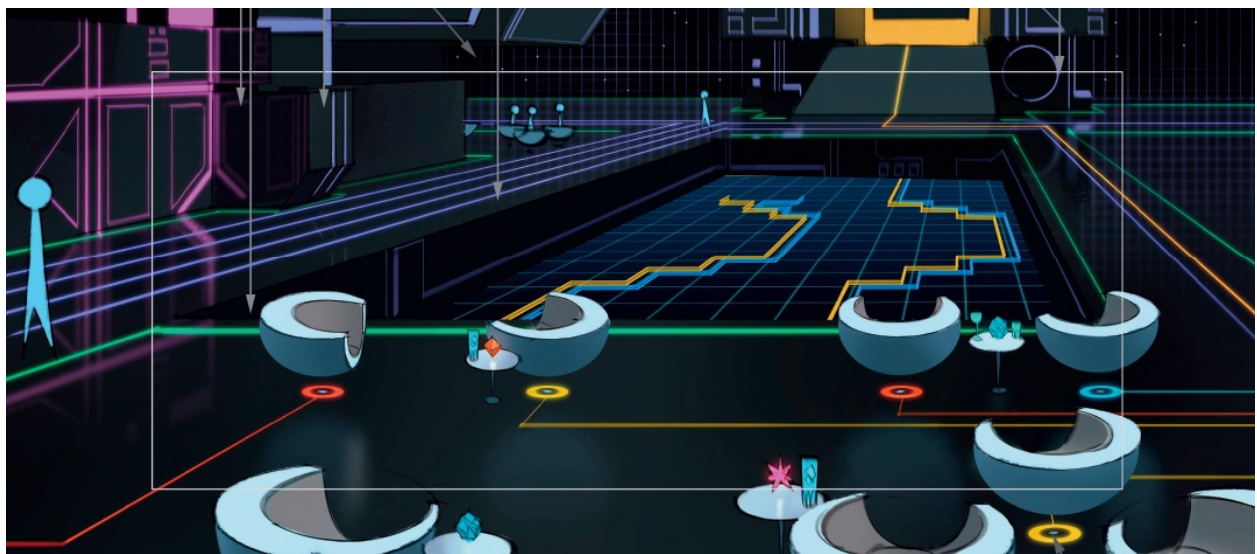
<Various Artists / digital>



<Ryan Lang / digital>



<Ryan Lang / digital>



<Mike Yamada / digital>



<Kevin Nelson / digital>



Kevin Nelson, Visual Development Artist

Litwak's office is full of funny, weird stuff: embarrassing old posters, his "CEO" coffee mug, collectible plates. There's a little window with a long-dead plant. He's even got an Emmy®.



<Kevin Nelson / digital>

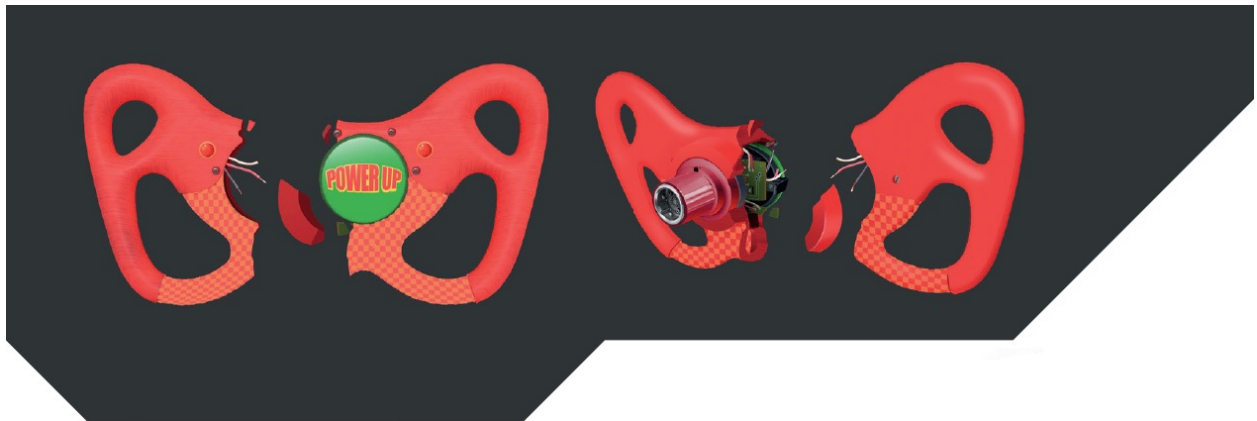


<Kevin Nelson / digital>



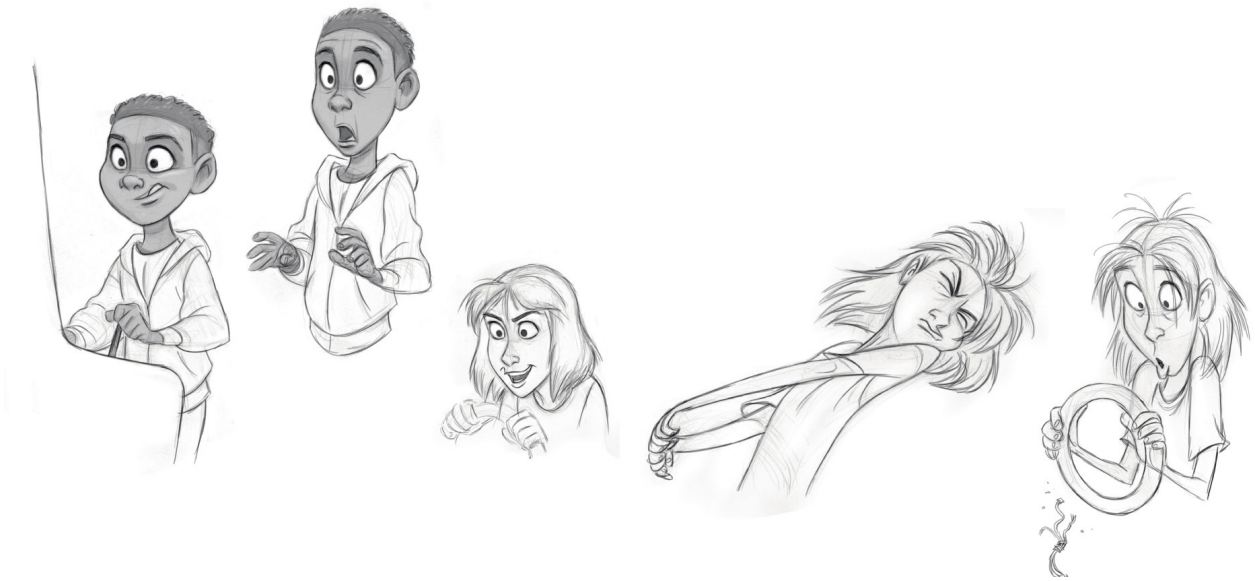
NO FIGHTING

<Matthias Lechner / digital>

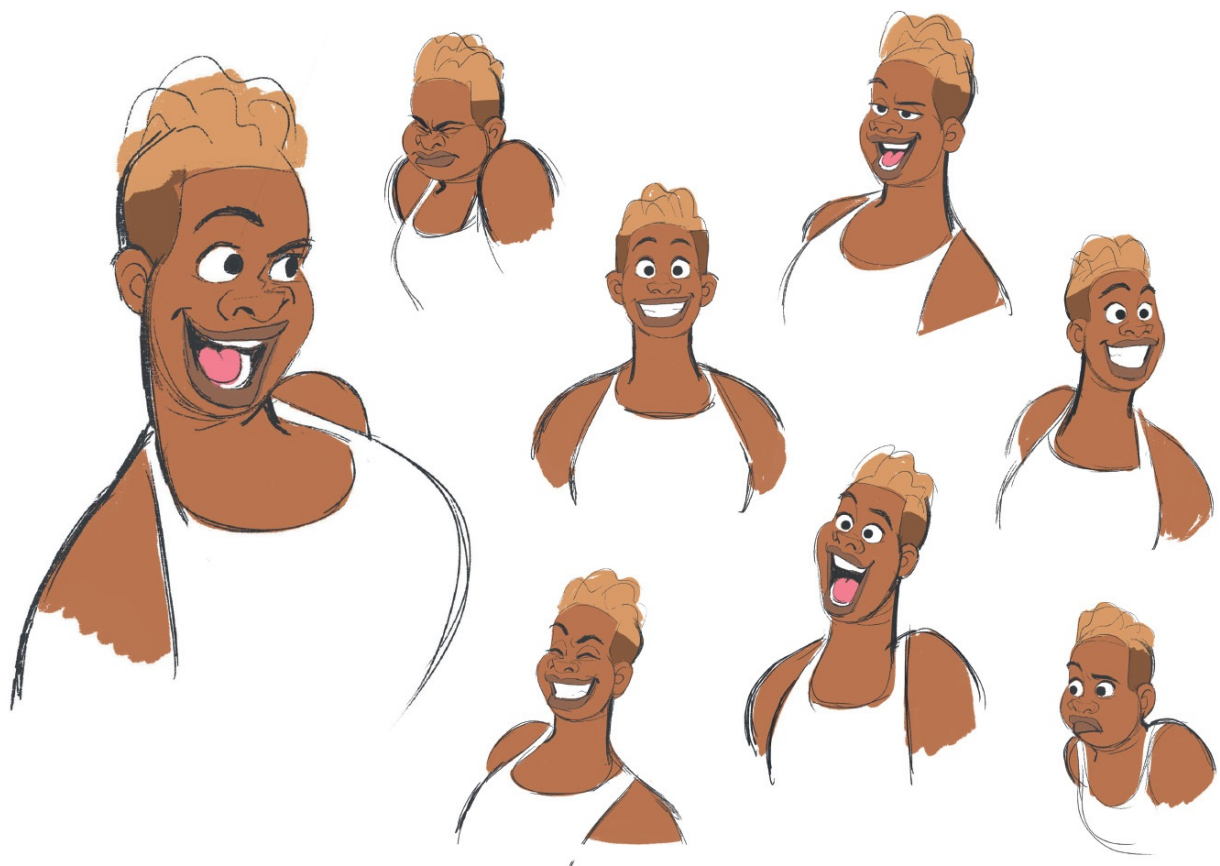


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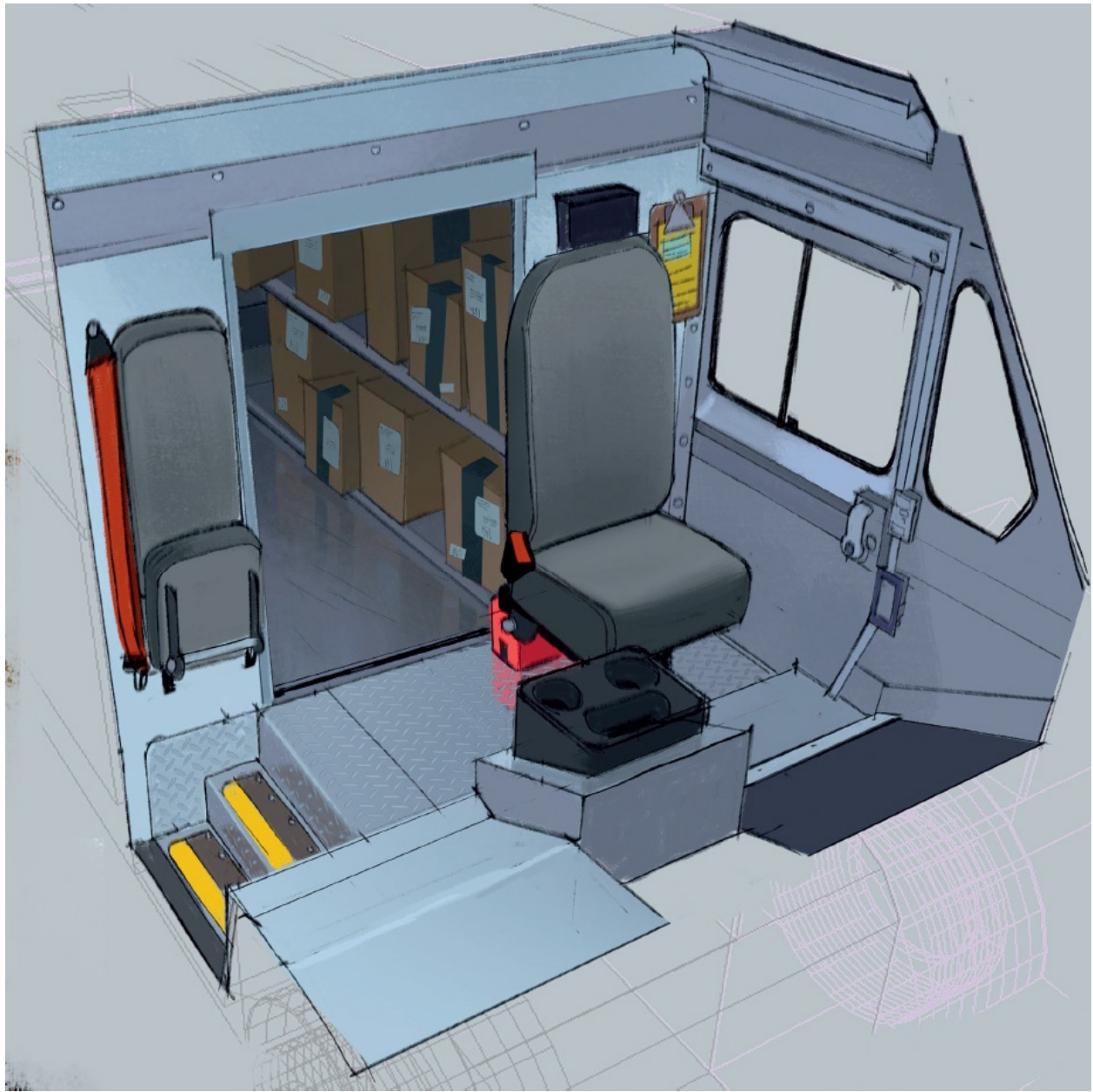
<Jeff Merghart / digital>



<Nicholas Orsi / digital>



<Cory Loftis / digital>



<Mike Yamada / digital>



<Matthias Lechner / digital>



<Mike Yamada / digital>



<Matthias Lechner / digital>

FELIX & CALHOUN



Cory Loftis

Production Designer · 🌐



In an early version of the film, we saw the arcade characters dressed casually. We gave Felix abs—though instead of a six-pack, he's got an eight-pack, in keeping with his eight-bit game programming. And he only wore boots in the first film so we had to give him feet. Neatly groomed feet.



Kevin Nelson and 8 others

7 Comments



Like



Comment



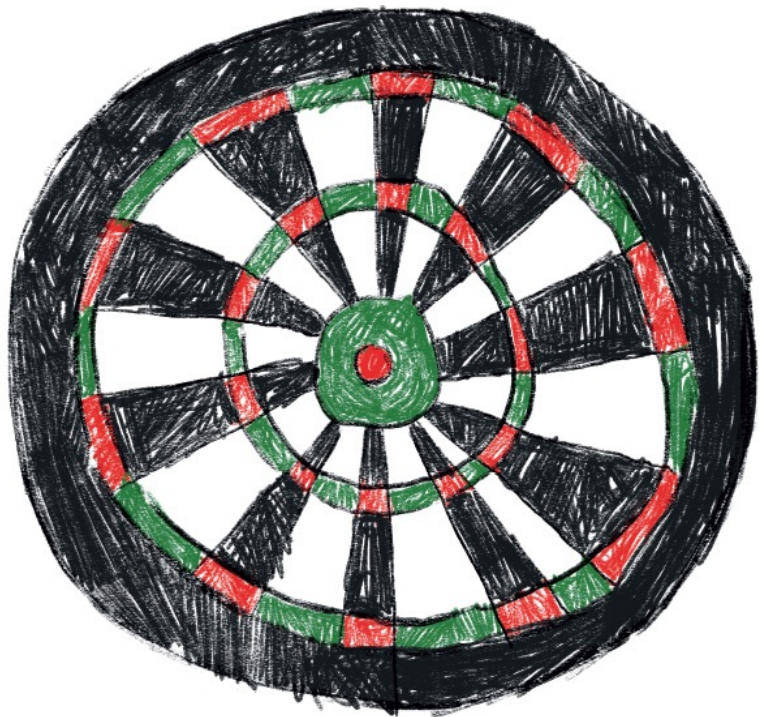
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<Jeff Merghart / digital>



<Cory Loftis / digital>



<Ryan Lang / digital>



Cory Loftis

Production Designer ·



Felix and Calhoun are married now, so Felix's apartment has elements of Calhoun around. His medals are still on the wall, but so is her weapon rack. Calhoun's foot locker is at the end of the bed.



Nick Orsi and 22 others

15 Comments



Like



Comment



Share



<Justin Cram / digital>



<Justin Cram / digital>



<Cory Loftis / digital>



Ami Thompson



Art Director, Characters · 

Calhoun doesn't actually know how to be casual. It's awkward and uncomfortable to her. She still wears dog tags, camouflage, and boots, but she ties on a Hawaiian shirt. She even has a holster, but for a knife instead of a pistol. She just can't let go of the military lifestyle.



Ernest Petti and 25 others

14 Comments



Like



Comment



Share



<Cory Loftis / digital>



<Michael Herrera / digital>



<Jeff Merghart / digital>



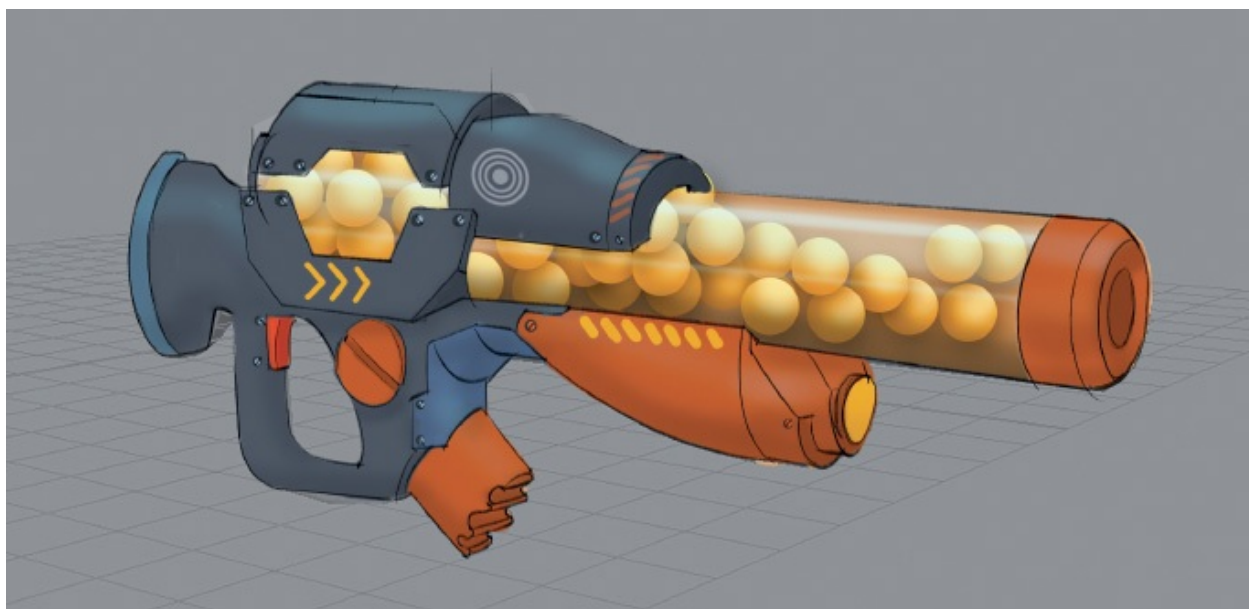
<Jeff Merghart / digital>



<Ami Thompson / digital>



<Jeff Merghart / digital>



<Cory Loftis / digital>



Matthias Lechner

Art Director, Environments · 🌐



An early version of the film showed flashbacks to Calhoun's childhood bedroom, which hinted at her military roots. It looked like an idyllic 1950s home, but there were little bombs and fighting toys mixed in with the teddy bears and diaper-changing table.



Cesar Velasquez and 16 others

9 Comments  ▾



Like

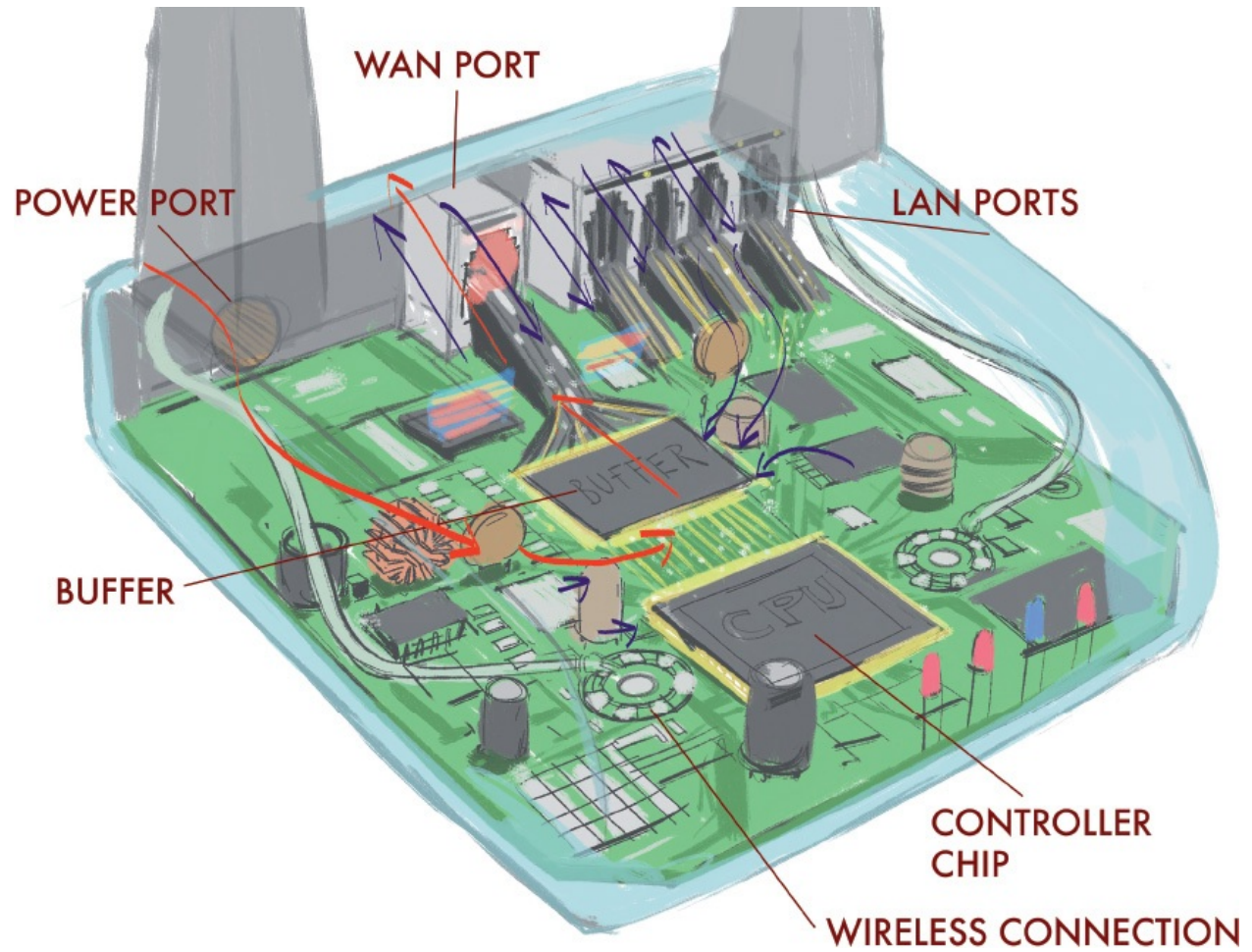


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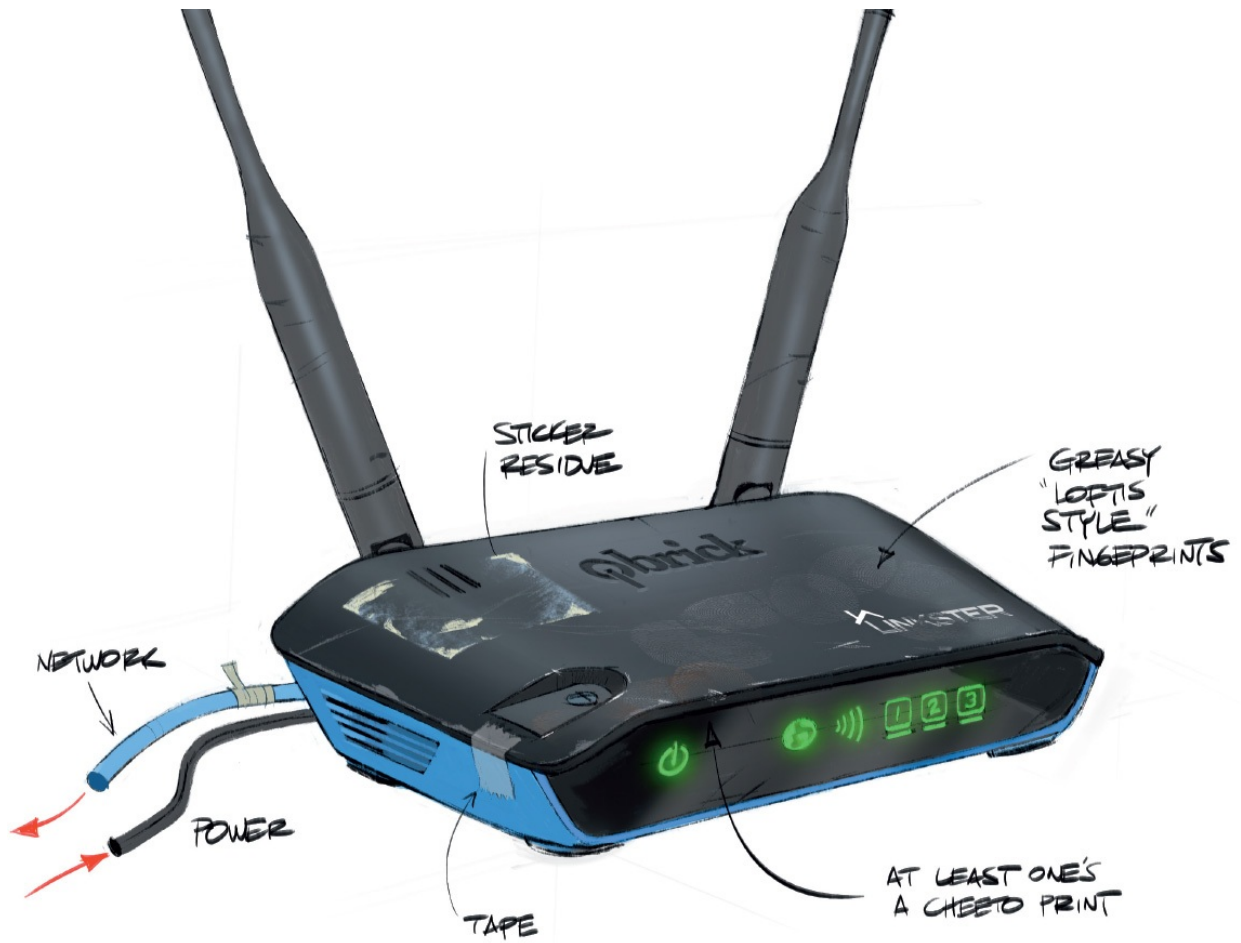


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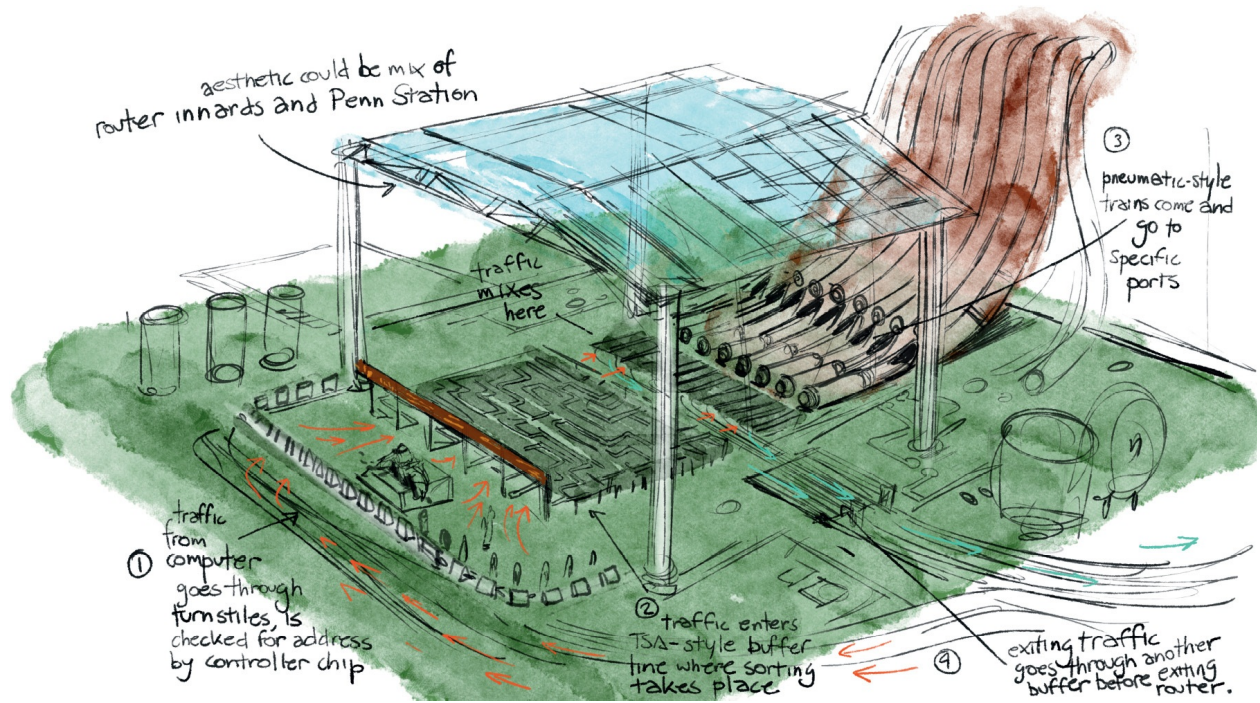
THE WI-FI ROUTER



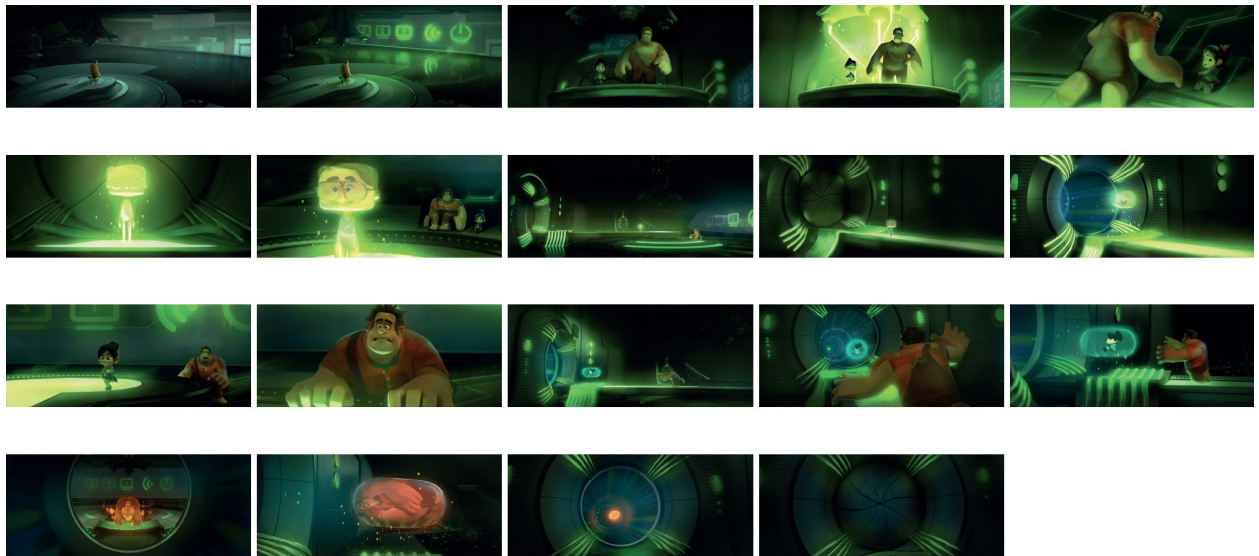
<Paul Felix / digital>



<Cory Loftis / digital>



<Paul Felix / digital>



<Mingjue Helen Chen / digital>



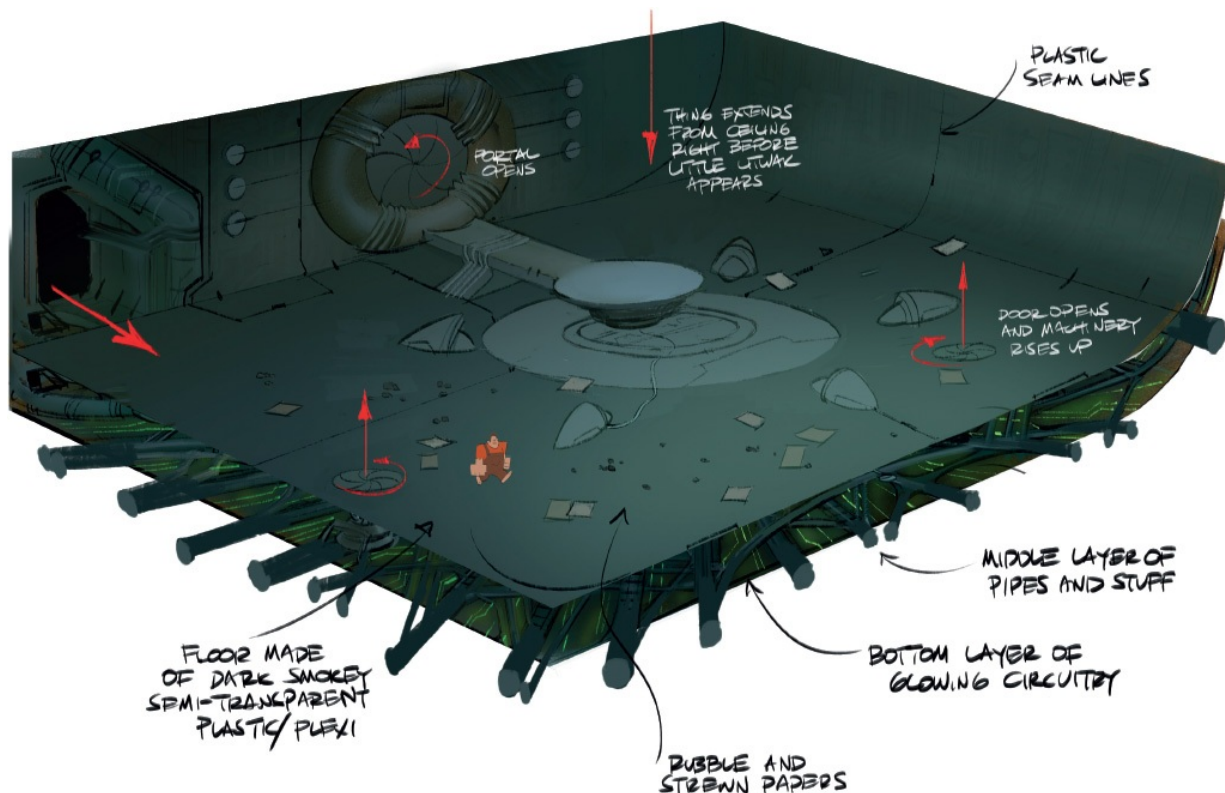
Matthias Lechner  @ArtDirector_Environments 

Our router design is a straightforward harbinger of what our version of the Internet looks like. It has 45-degree angles and the Wi-Fi logo, but it doesn't come to life until Litwak clicks the browser icon. Then the whole room comes to life, lights go on, the portal opens, and Litwak's user appears. Ralph and Vanellope, following Litwak's user, get sucked into the Internet.

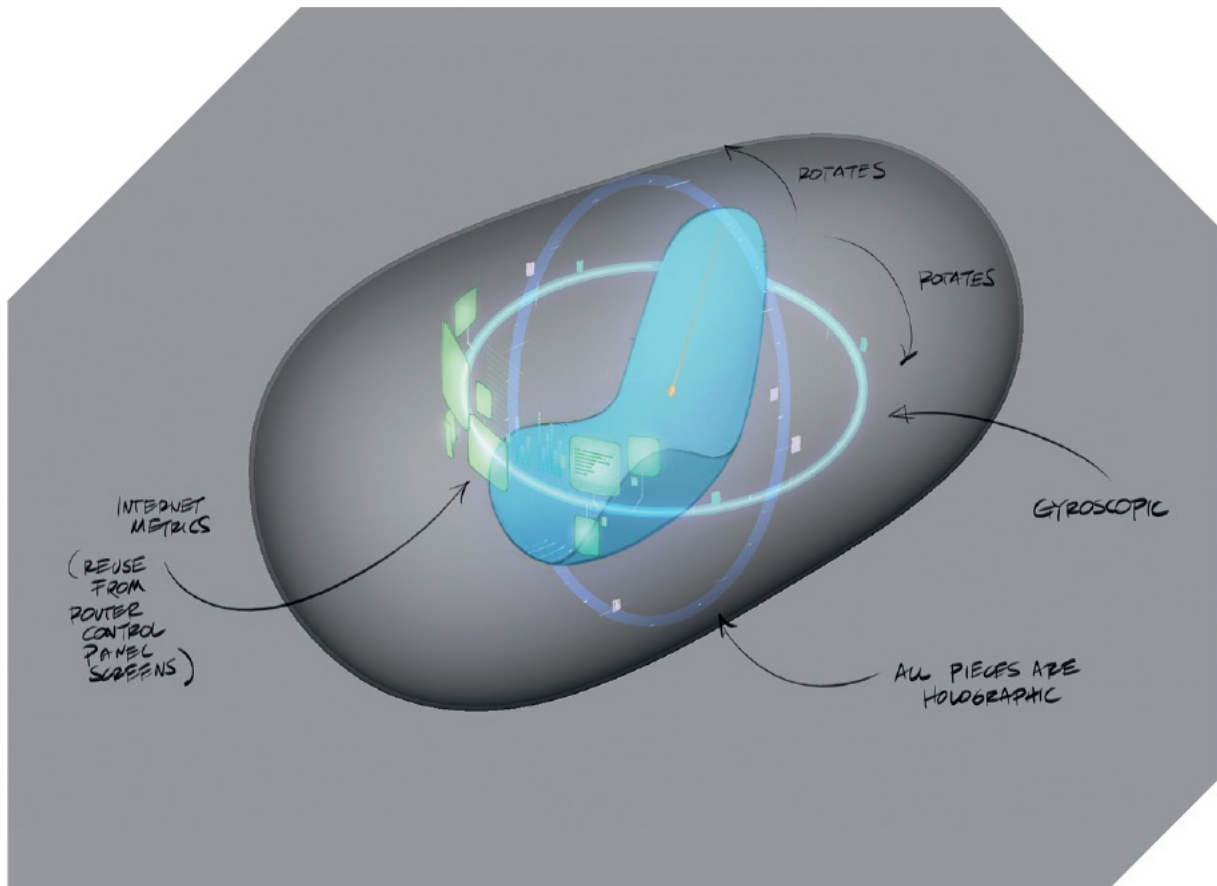
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<Cory Loftis / digital>



<Cory Loftis / digital>



<Paul Felix / digital>



<Paul Felix / digital>



Nathan Warner ✓

@DirectorOfCinematography_Layout

We initially tried having them go through a coaxial cable, enter a fiber-optic box, warp and become light, and then enter the Internet. But then it was suggested that it should feel more like they were flying over the Los Angeles basin at nighttime, to really show the vastness of the Internet.

12

7

29



<Mingjue Helen Chen / digital>



<Various Artists / digital>



<Peter DeMund / digital>

THE INTERNET



<Matthias Lechner / digital>



[–] **Jessica Julius** Author

What research did you do as you prepared to tackle something as enormous and chaotic as the Internet?

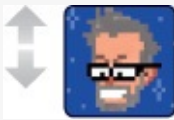
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[–] **Clark Spencer** Producer

We met with experts in computer science, Internet gaming, cyber security.

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[–] **Rich Moore** Director

Most of us think about the Internet in a very simplistic, almost magical way. But our research showed us that it's all hardware. The Internet really is just series of tubes—wires, boxes, giant cables under the sea. And huge rooms with row upon row of servers.

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[–] **Phil Johnston** Director

We wanted to see a physical representation of the Internet, so we went to a data center in downtown Los Angeles. When people on the West Coast log on to the Internet, their requests go through the data center we visited at One Wilshire. There are several big server farms like this around the world, where social media, gaming, news, and commerce companies rent space like an apartment on a city block.

companies rent space like an apartment on a city block.

[permalink](#) [embed](#) [parent](#)



[–] **Matthias Lechner** Art Director, Environments We were surprised at how chaotic the physical Internet is. You could see how it had grown over time. Some wires were neatly bundled together, others were a deeply tangled mess layered with years of dust.

[permalink](#) [embed](#) [parent](#)



[–] **Jessica Julius** Author

How did your research inform your design of the Internet?

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[–] **Rich Moore** Director

Before seeing One Wilshire, we had a very naïve idea of what the Internet was. After seeing it, we went from almost magical thinking to being super literal. In the end, we wanted Ralph and Vanellope to enter a new universe that's exciting and entertaining, so we combined the reality of our research with the artists' fun and fantastical ideas.

[permalink](#) [embed](#) [parent](#)



[–] **Jim Martin** Visual Development Artist We tried to capture what it would be like if you could really travel to the Internet. We looked at maps of the Internet showing machines linked to

different hubs around the world and thought it looked like a planet filled with connected cities alive with color, motion, and light. It depicted how the Internet truly is global, so we decided to design it that way.

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[–] **Matthias Lechner** Art Director, Environments We designed our version of the Internet literally from the top down. As you approach it from above, it resembles patterns you would find on a motherboard, with a grid of rectangular platforms and repetitive shapes connected by paths that turn in 45-degree angles. But as you descend, it becomes a three-dimensional bustling cityscape with tall website-buildings connected by energy-roads on multiple levels. And this is just the surface level floating above the industrial structures of the endless deep web beneath it.

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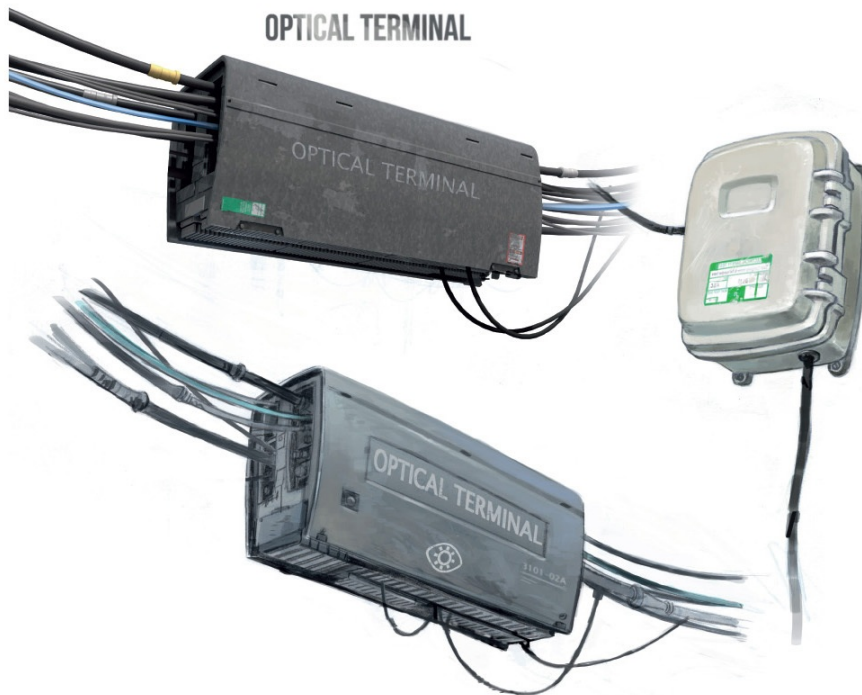


[–] **Cory Loftis** Production Designer We used a shape language based on modern smartphones and apps—a square with rounded corners, and a clean, crisp atmosphere with bright white light and blue shadows.

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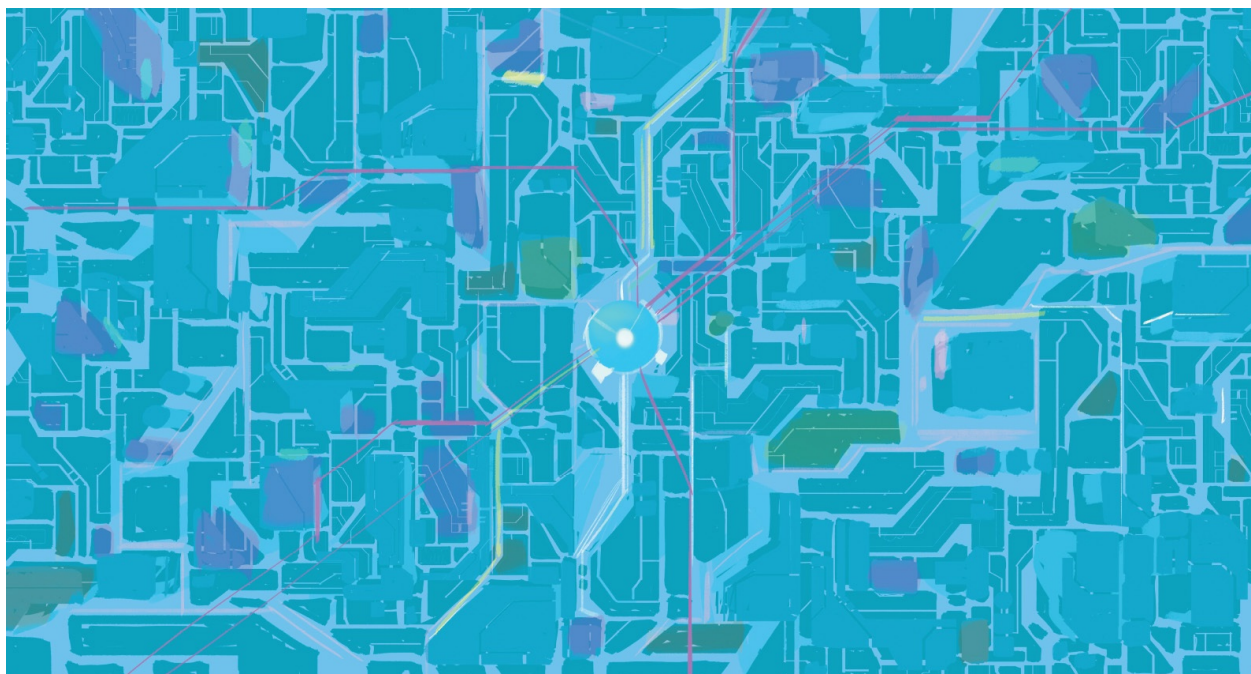


EXTERIOR
ELECTRICAL BOX



OPTICAL TERMINAL

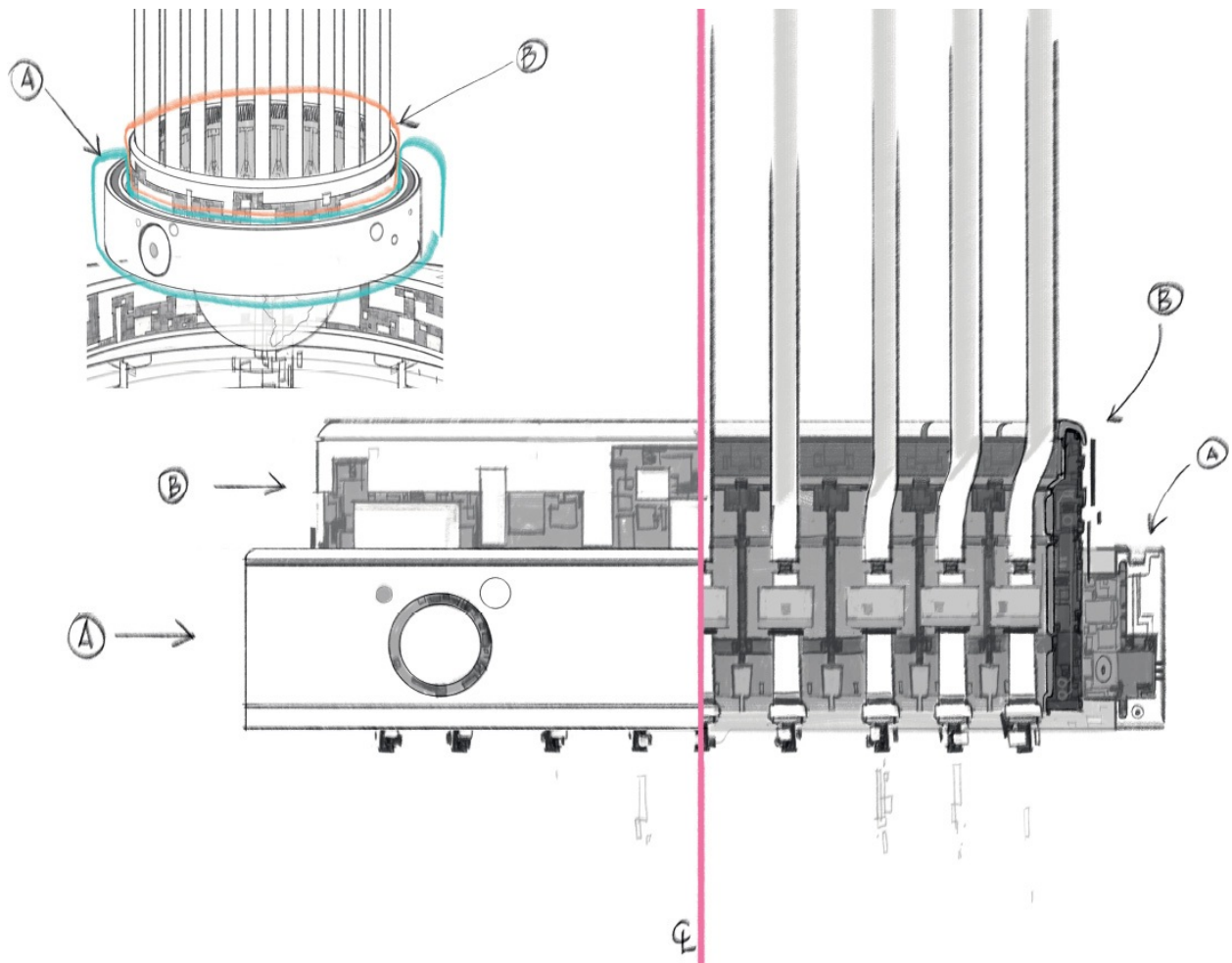
<Jim Martin / digital>



<Mingjue Helen Chen / digital>



<Kevin Nelson / digital>



<Mike Yamada / digital>



Matthias Lechner

Art Director, Environments · 🌐

We had so much fun populating this world with Internet-specific gags. The weather app is actually the weather. A travel site is a suitcase. There are Skype and FaceTime phone booths, a java coffee shop, a LAN party bus. There's a little identity thief running around, a Girl Scout handing out cookies at the entrance to a website, a pop-up guy.



Mingjue Helen Chen and 29 others

13 Comments



Like



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<Matthias Lechner / digital>



<Mingjue Helen Chen / digital>



Matthias Lechner



Art Director, Environments · 

The Internet is international. Different countries use different websites. We encouraged the artists with international backgrounds to work in their native languages in their designs.



Cory Loftis and 32 others

6 Comments



Like



Comment



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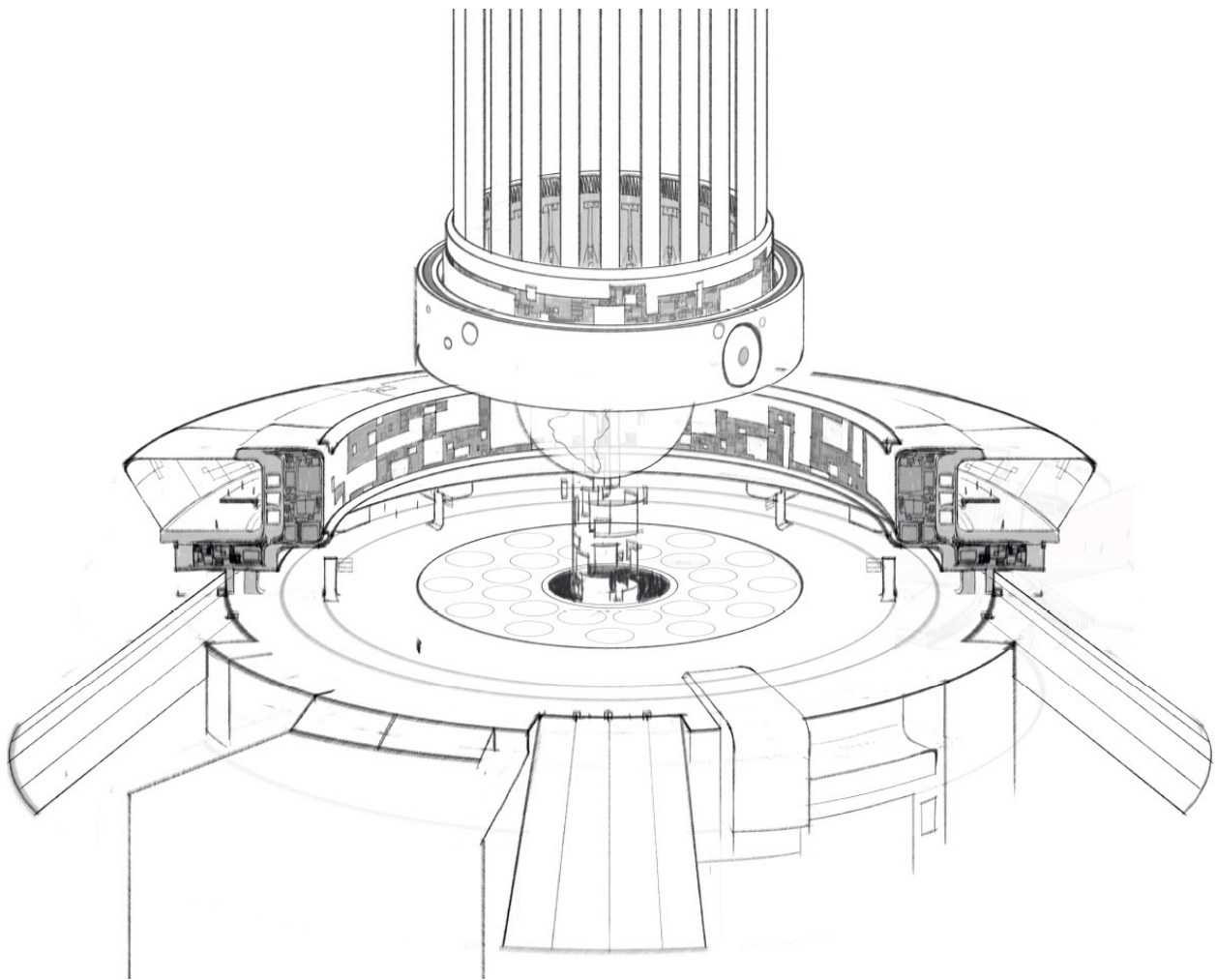
<Mingjue Helen Chen / digital>

THE HUB



Cory Loftis, Production Designer

The HUB is the portal to the Internet, where users, email, and data arrive and are then transported elsewhere to sites, apps, and games. It's also the central depot for heavy freight like ZIP files and large media files.



<Mike Yamada / digital>



<Matthias Lechner / digital>

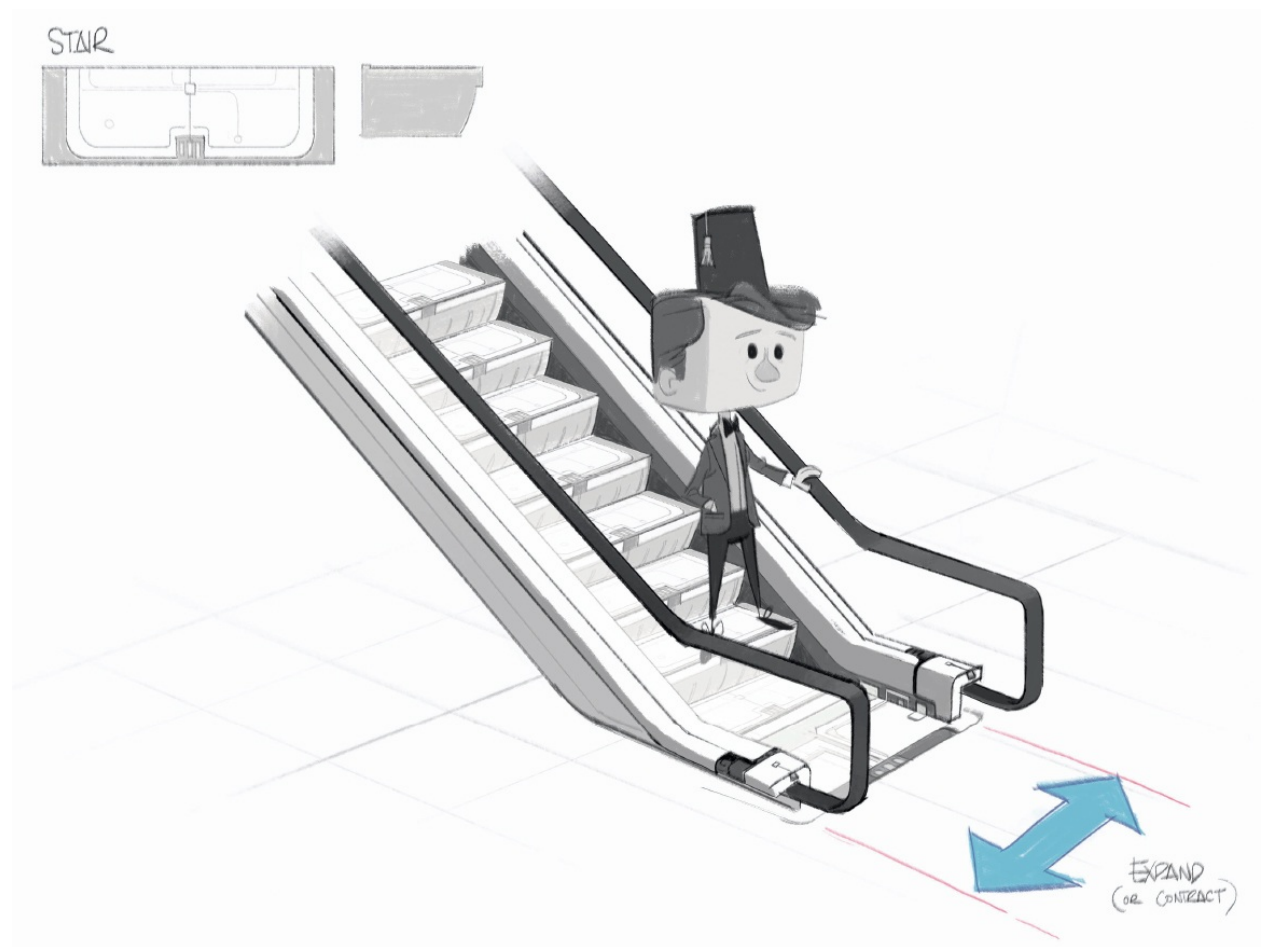


Matthias Lechner, Art Director, Environments

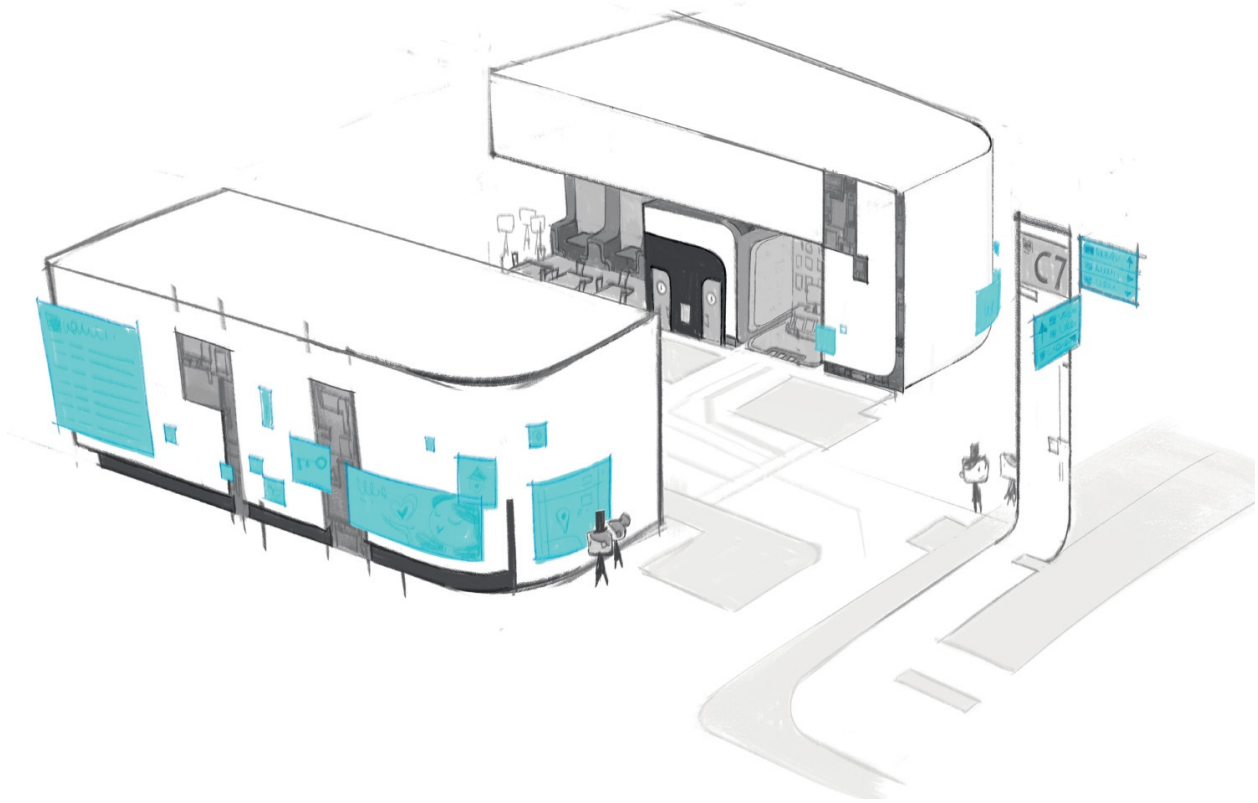
Users arrive at the HUB as data packages via fiber-optic cables. They are filtered through a prism that splits the flow of data into different colors, and each of those colors goes to a different site. We were inspired by color-coded guiding systems at airports.



<Matthias Lechner / digital>



<Mike Yamada / digital>

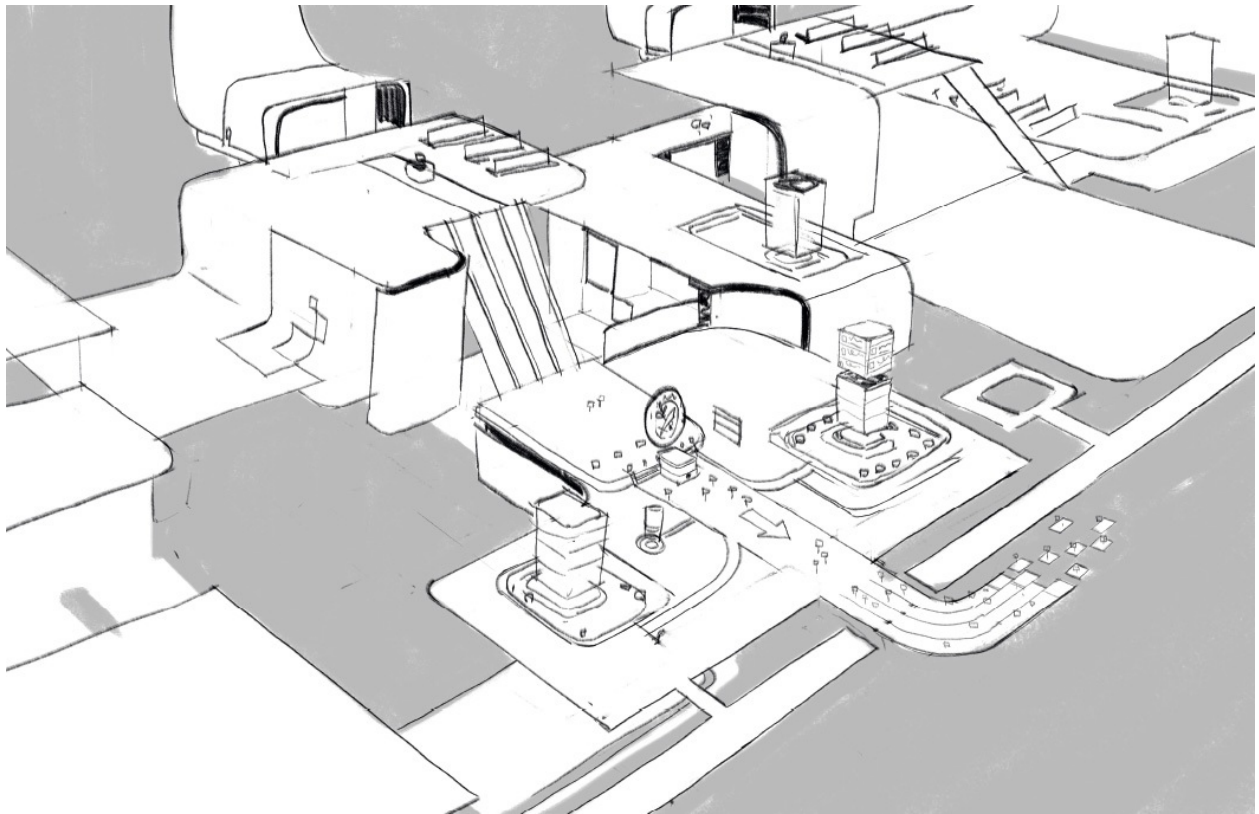


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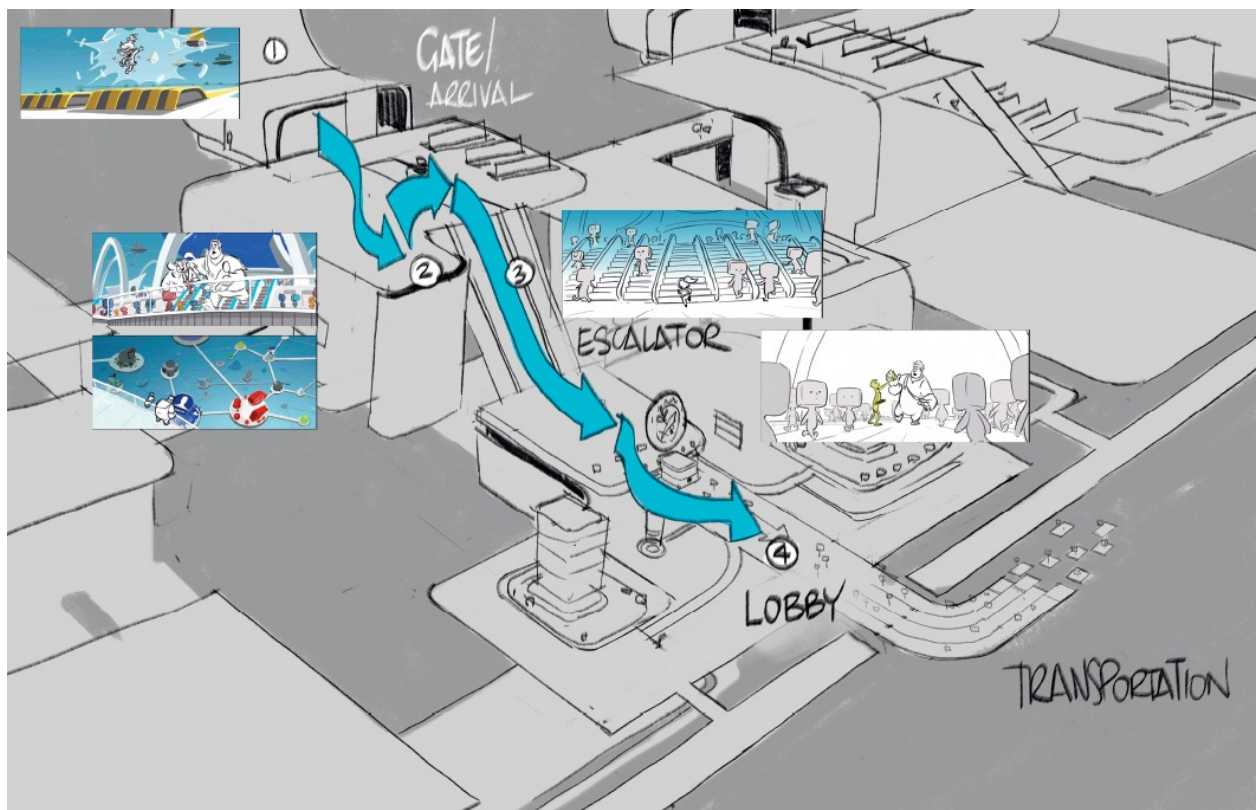


Cory Loftis, Production Designer

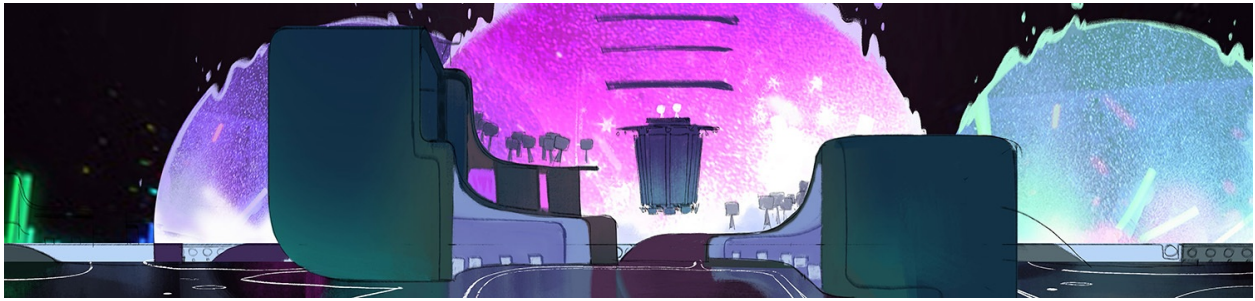
The first place Ralph and Vanellope visit in the Internet is the HUB. They're in the Internet but not yet at a website. It's like arriving at an ultra-modern airport. To go to a website, they have to get down to the ground transportation level, where they can catch a ride to somewhere else.



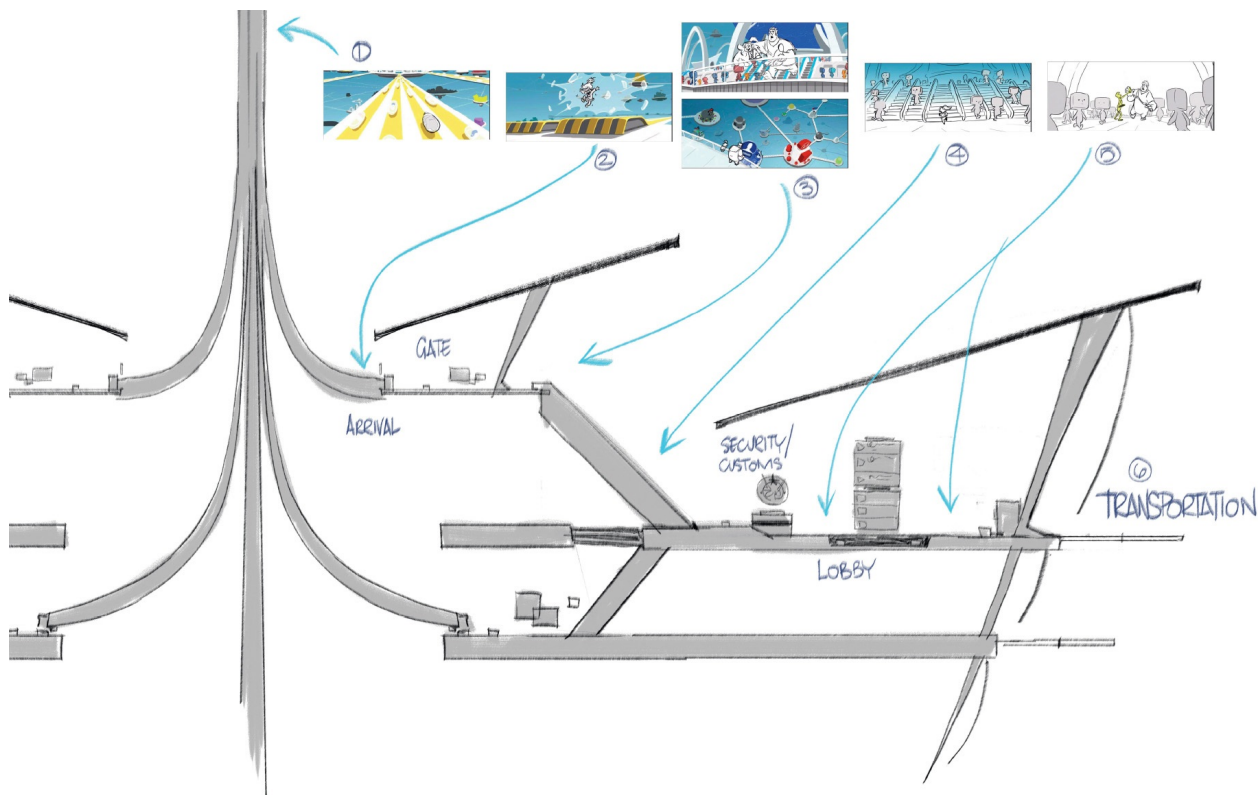
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<Mike Yamada / digital>



<Mike Yamada / digital>



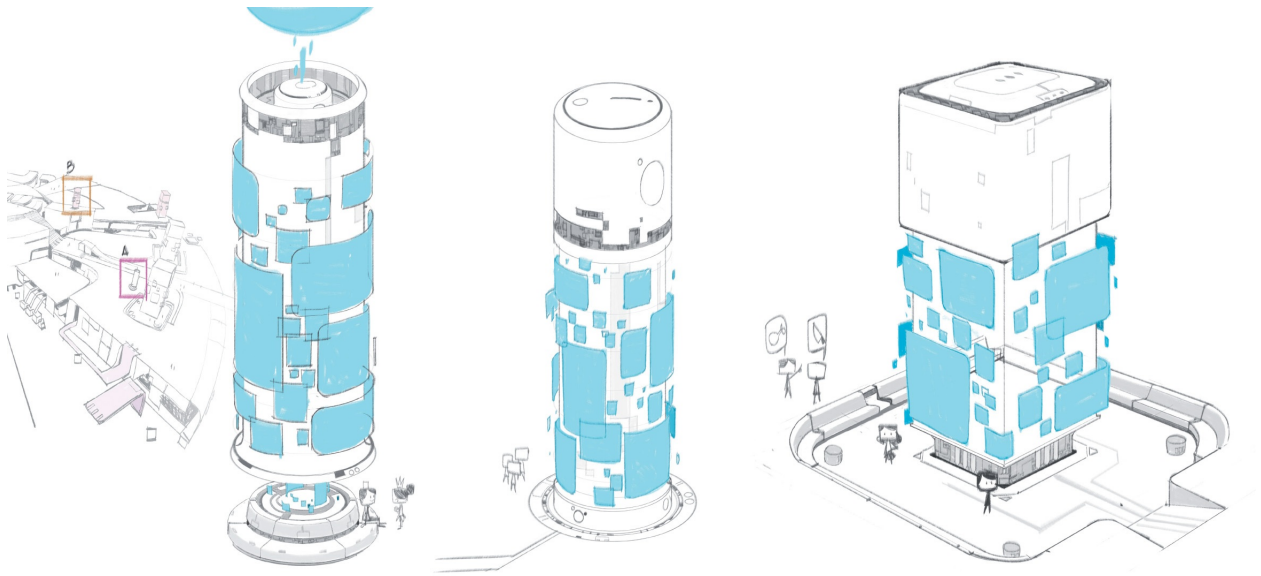
<Mike Yamada / digital>



Cory Loftis, Production Designer

From the HUB, Vanellope quickly intuits how the Internet works —she sees emails loaded into mail delivery trucks, data packets being compressed and sent off, and users jumping into linkcars

to go to other websites.



<Mike Yamada / digital>



<Mike Yamada / digital>

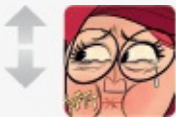
POPULATING THE INTERNET



[–] **Jessica Julius** Author

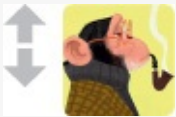
How did you decide what characters would populate the Internet?

[permalink](#) [embed](#)



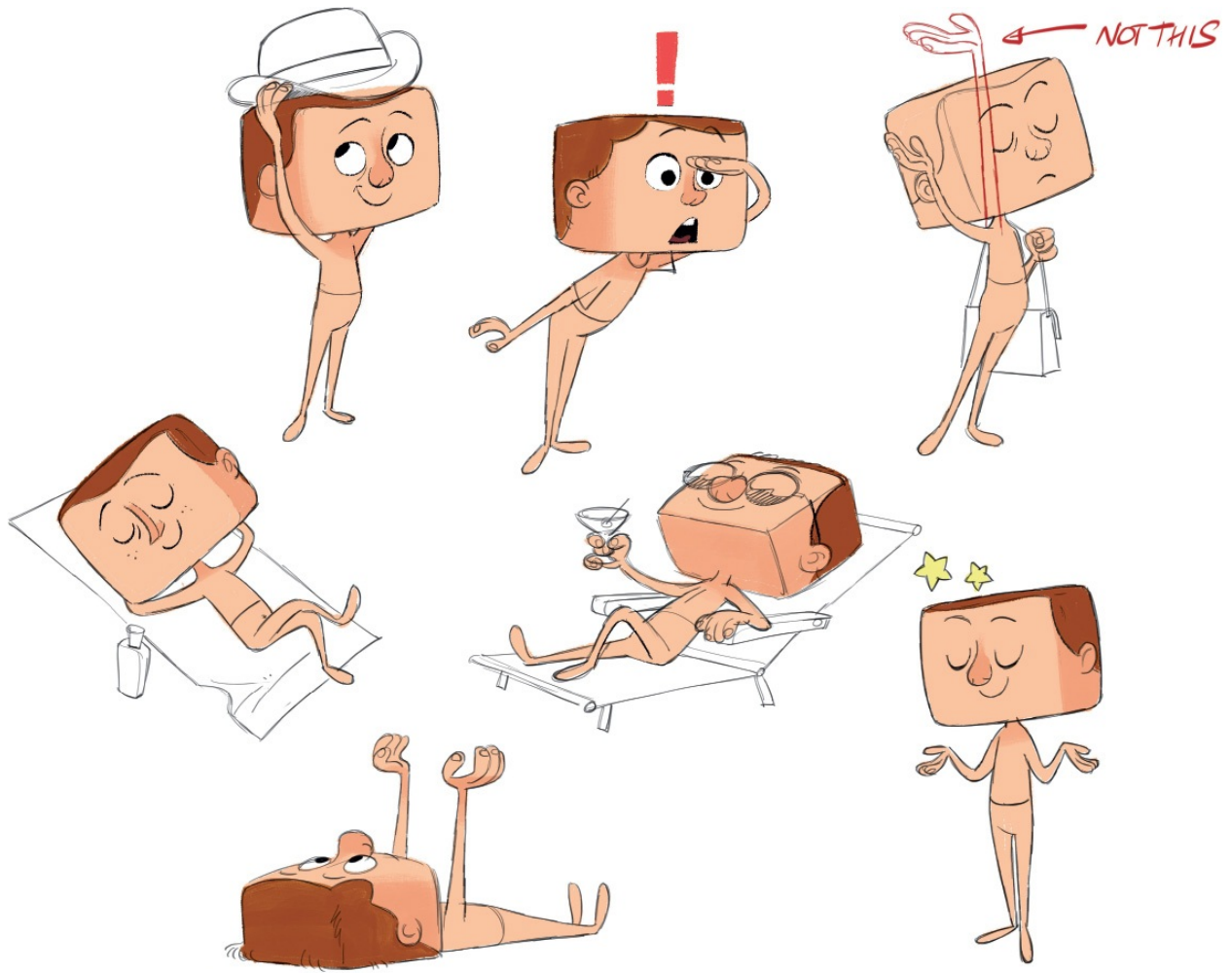
[–] **Ami Thompson** Art Director, Characters We needed to depict the workings of the Internet, so we created two basic types of beings to represent its constant busyness: users and netizens.

[permalink](#) [embed](#) [parent](#)



[–] **Cory Loftis** Production Designer Users are the digital versions of us, our avatars when we're on the Internet. Browsing websites, clicking links, sending emails, doing on the Internet whatever humans tell them to do. Netizens on the other hand are autonomous. We humans don't actually see them but we feel them when we visit a website. They're the ones emptying the recycling bin, delivering email, the HTML workers constructing new websites. They're doing all the things that keep the Internet working.

[permalink](#) [embed](#) [parent](#)



<Borja Montoro / digital>



<Paul Felix / digital>



<Nicholas Orsi / digital>



Ami Thompson  @ArtDirector_Characters

The users are uniform. They have a basic head and a basic body, but the human can customize features—skin color, eye, mouth and nose shapes, hair, clothing—to make the user feel like a very simplified version of that human on the Internet.

 14

 25

 37



<Ami Thompson / digital>

<Alli Thompson / digital>



<Meg Park / digital>



<Ryan Lang / digital>



<Ami Thompson / digital>



Kira Lehtomaki  @HeadOfAnimation

We wanted the users to feel like they are being controlled by a joystick or a mouse, something more mechanical on the other end of the computer. Humans are not physically inside these characters moving them around, but we are controlling them.

9

18

29



<Cory Loftis / digital>



USERS' TEETH STAY IN ONE SPOT AS THOUGH THEY HAD A SKULL. THEIR TEETH AND MOUTHS JUST DON'T SLIDE AROUND THE FACE.

<Cory Loftis / digital>



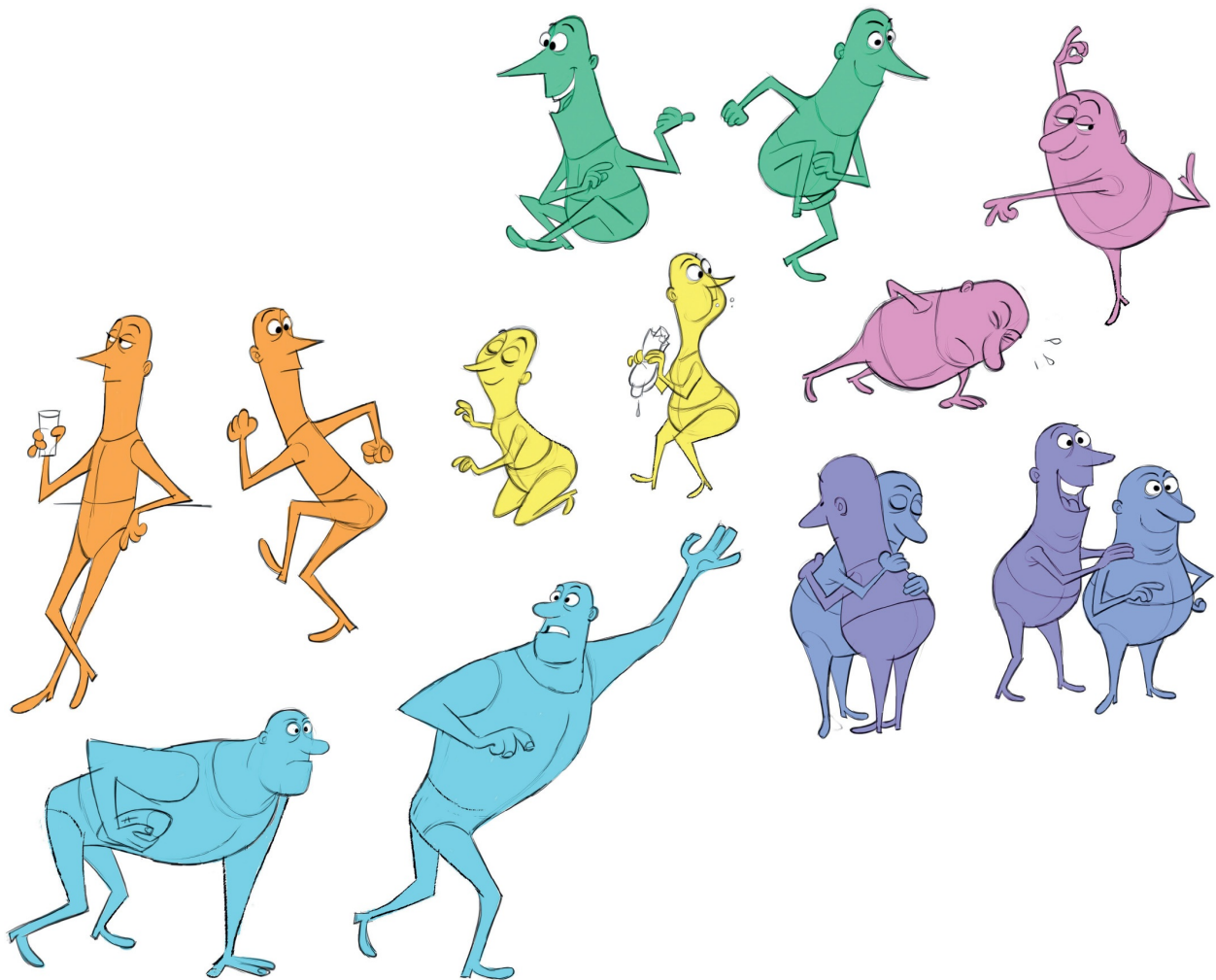
Ami Thompson  @ArtDirector_Characters 

There are millions of netizens in the Internet. We created several different body types for them, then gave them different colors and clothing and hairstyles, so they all have a unique look.

 4

 16

 31



<Borja Montoro / digital>



Cory Loftis  @ProductionDesigner



The inspiration for the netizens was a retro look that feels modern. Often what's considered a modern or futuristic design style is actually kind of dated. Think Instagram filters that make photos look like Polaroids or 1970s film stock.

 12

 6

 26



<Nicholas Orsi / digital>



Kira Lehtomaki  @HeadOfAnimation



It's fun to comedically depict daily life in the Internet. We did an animation test where a user is shopping at Amazon with the netizen pushing a shopping cart behind him. The user throws items into the cart but just as he's getting out a credit card to pay, he gets distracted and goes to YouTube to watch a video and never returns to check out, leaving the abandoned netizen without a sale.

 17

 10

 43



<Ami Thompson / digital>

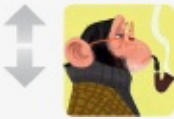
BUILDING THE WEB



[–] **Jessica Julius** Author

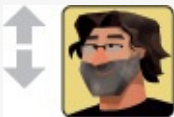
How did you approach the design of the websites themselves?

[permalink](#) [embed](#)



[–] **Cory Loftis** Production Designer The challenging part was trying to design the feeling you have when you visit a website, not the reality of it. For example, at Amazon when you select an item to buy, a real person at a physical warehouse somewhere puts that item in a box and ships it to you. But shopping online feels like a private shopping experience, so that's what the website depicted in the film looks like.

[permalink](#) [embed](#) [parent](#)



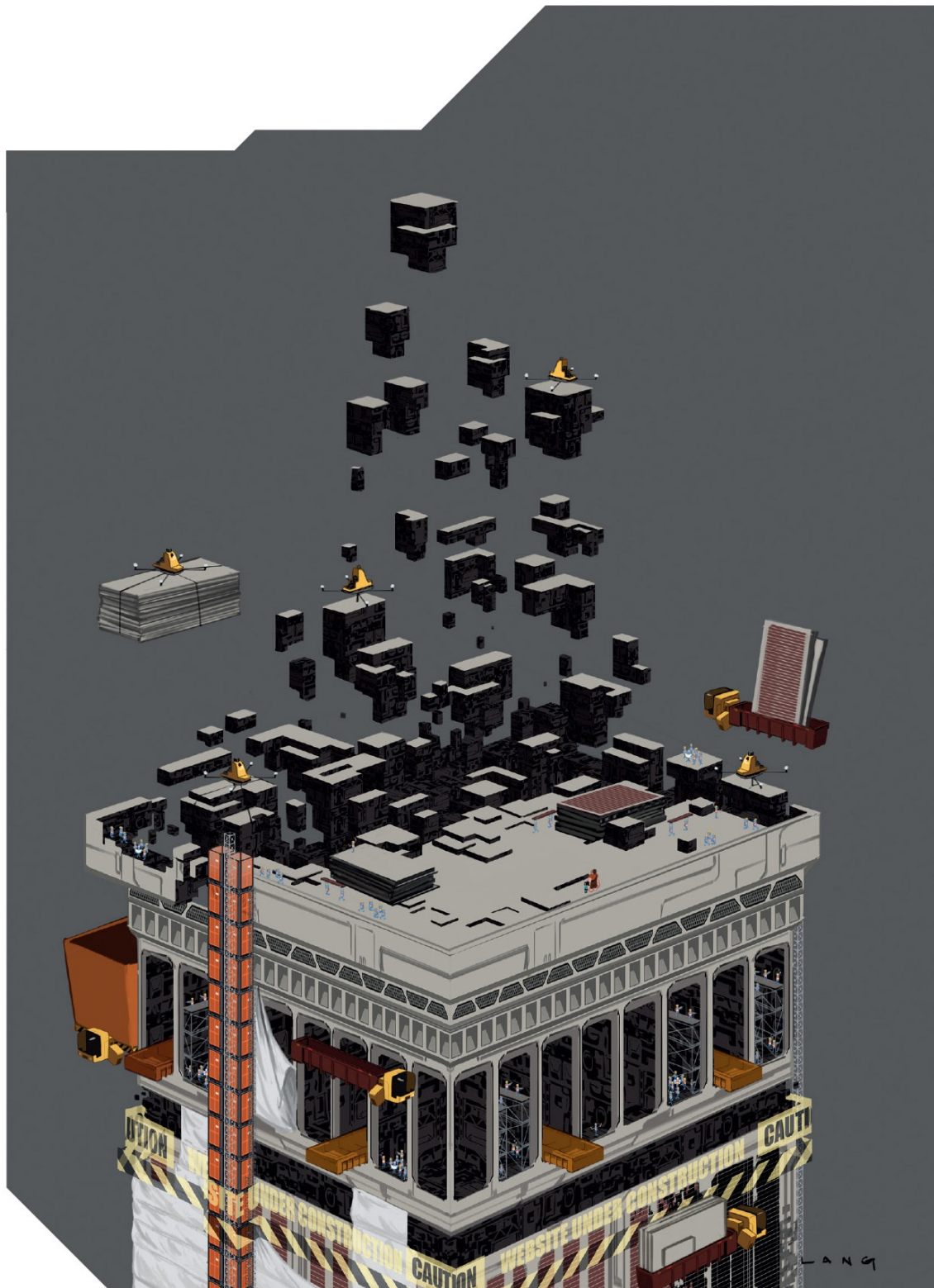
[–] **Matthias Lechner** Art Director, Environments We thought of the individual websites as buildings within a city. The interior of each building has a style, shape language, and color palette unique to that website. Scale is based on user traffic, so some buildings are much larger than others. High-traffic sites have many roads connecting to them and they stand out on the horizon. Midsize sites, which comprise most of the Internet, are densely packed, with congested roads. Small sites are isolated, usually with only one small road leading to them.

[permalink](#) [embed](#) [parent](#)

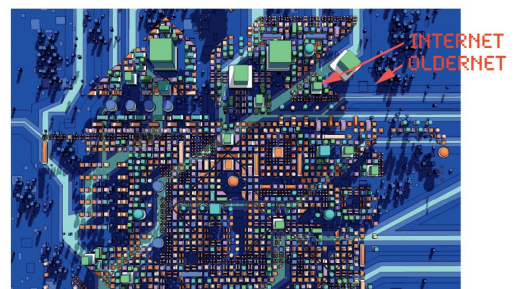
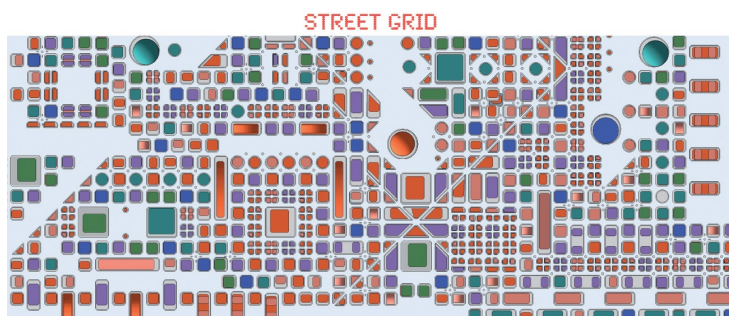
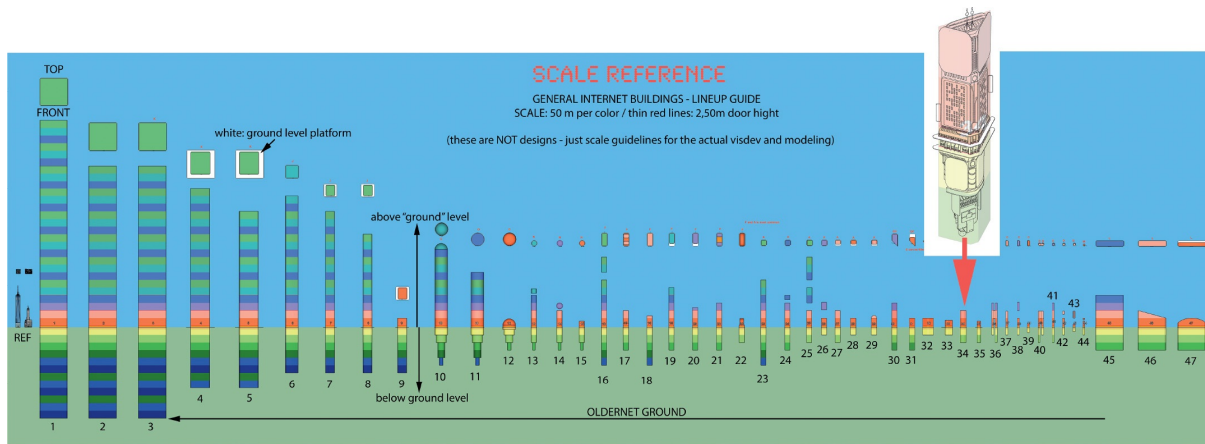


[–] **Mike Yamada** Visual Development Artist The websites are buildings that can click together and interlock in a Tetris-like way. We had to create buildings that represented generic background websites and apps, as well as well-known sites.

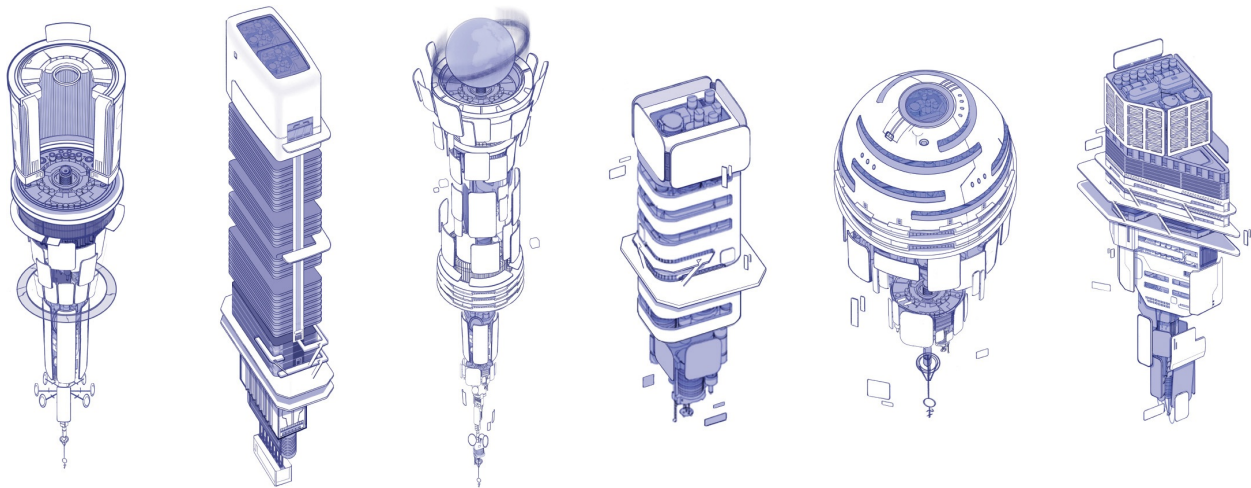
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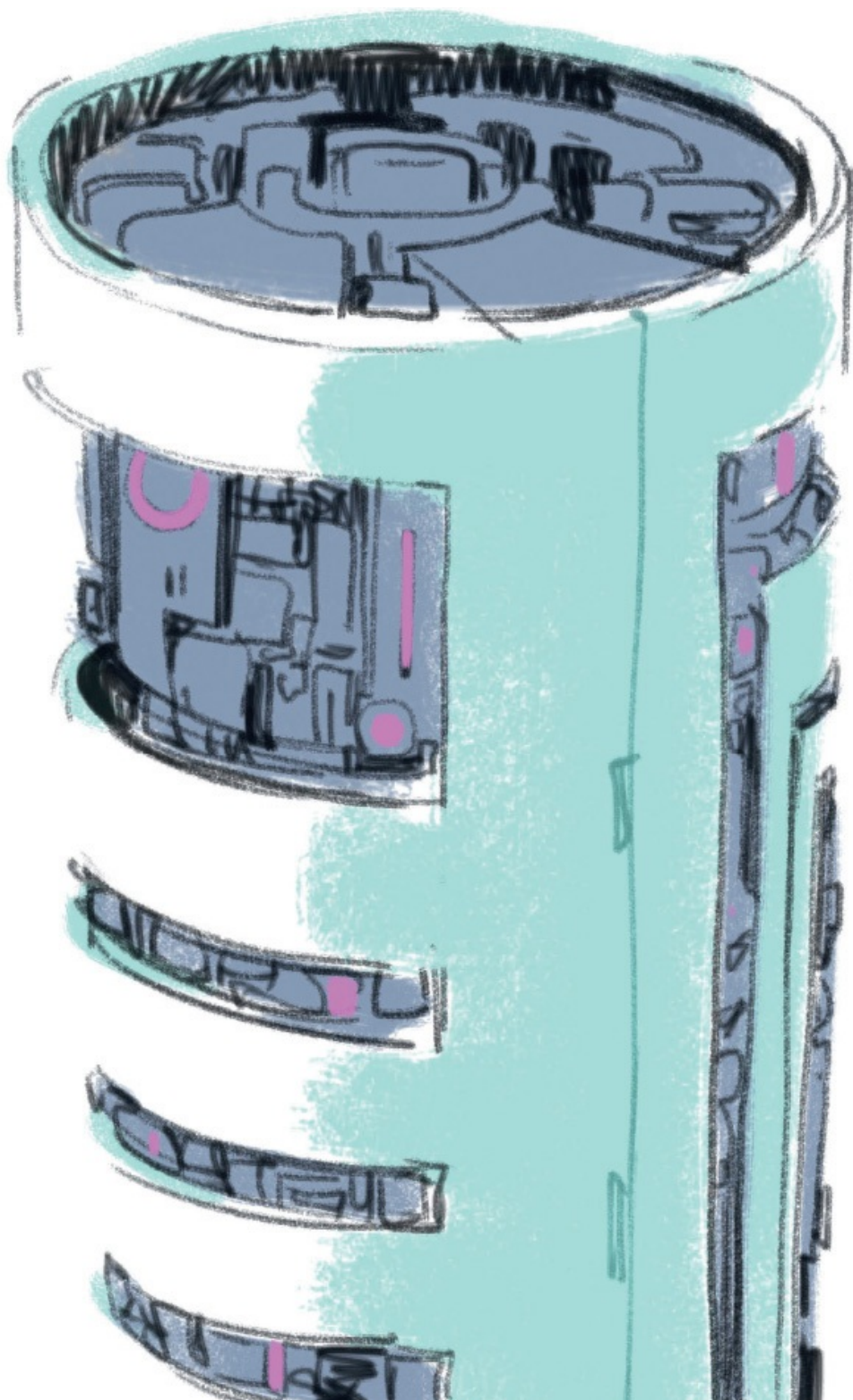
<Ryan Lang / digital>



<Matthias Lechner / digital>



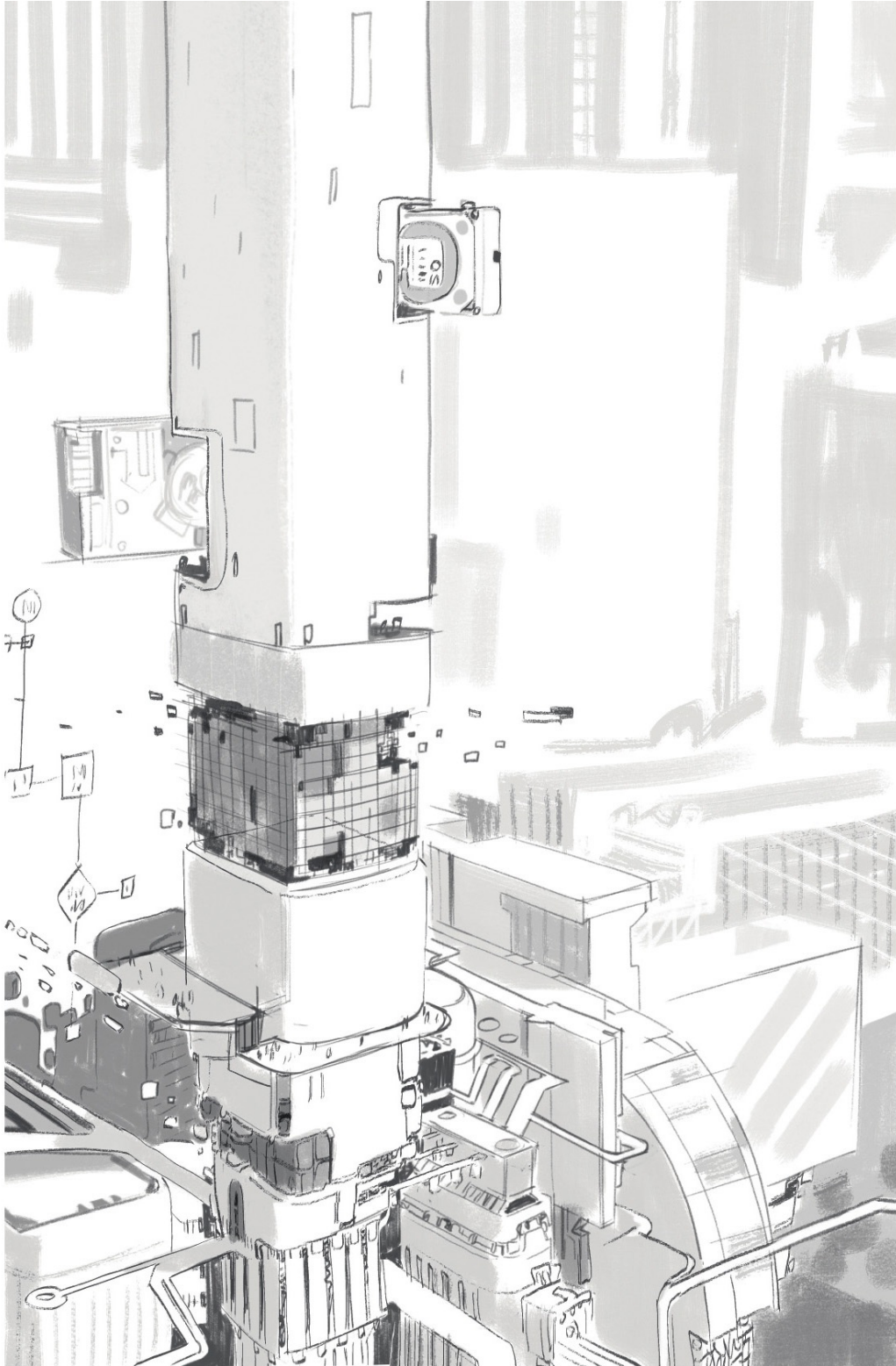
<Justin Cram / digital>



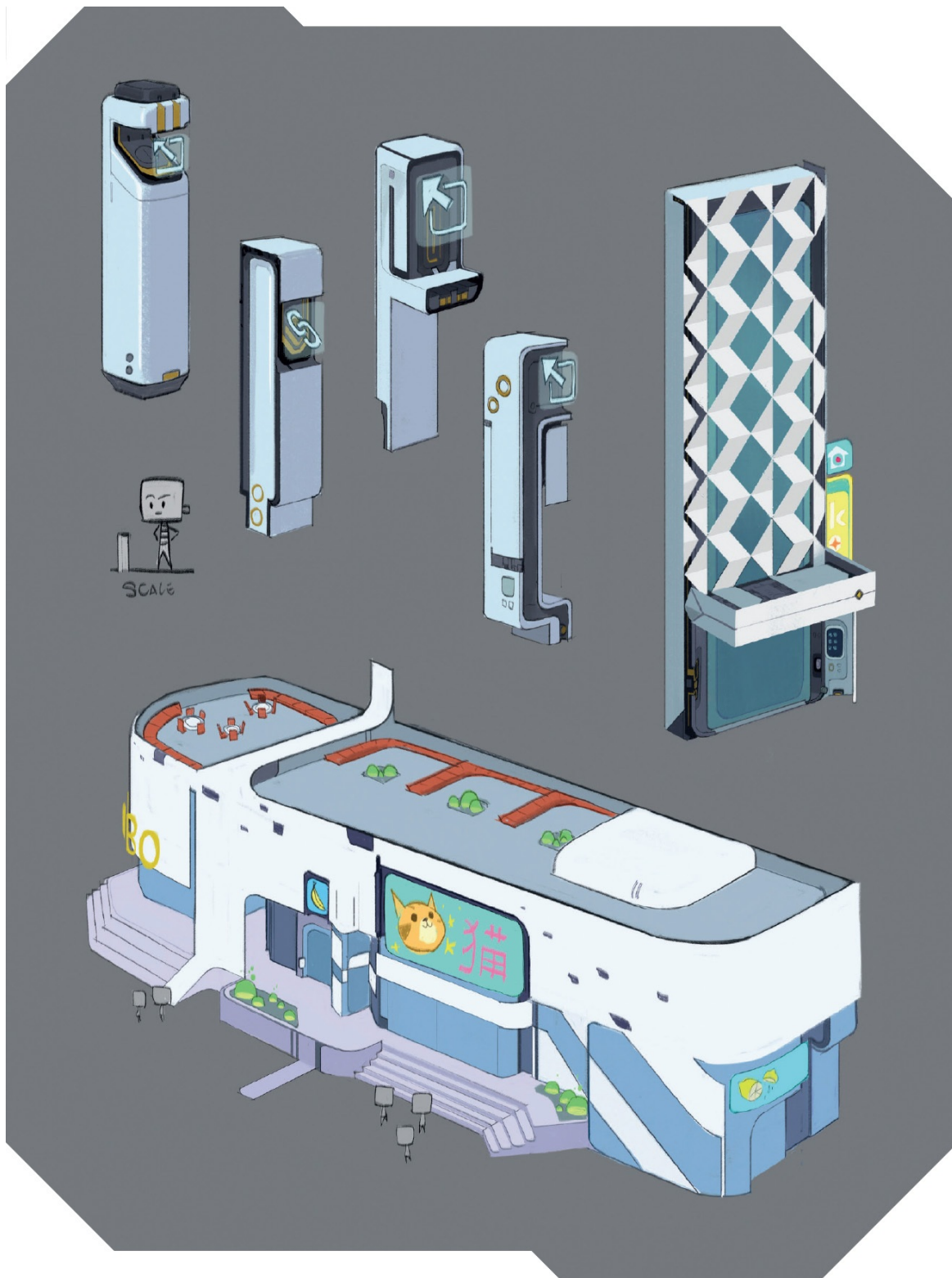
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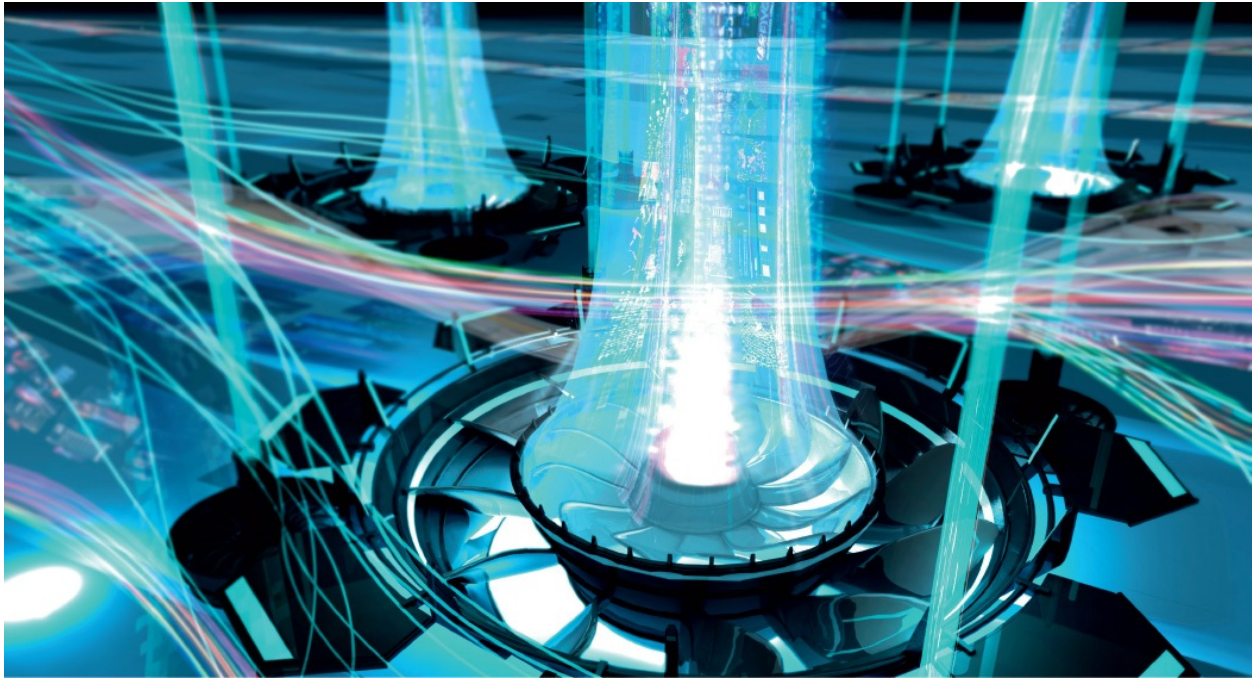
<Mike Yamada / digital>



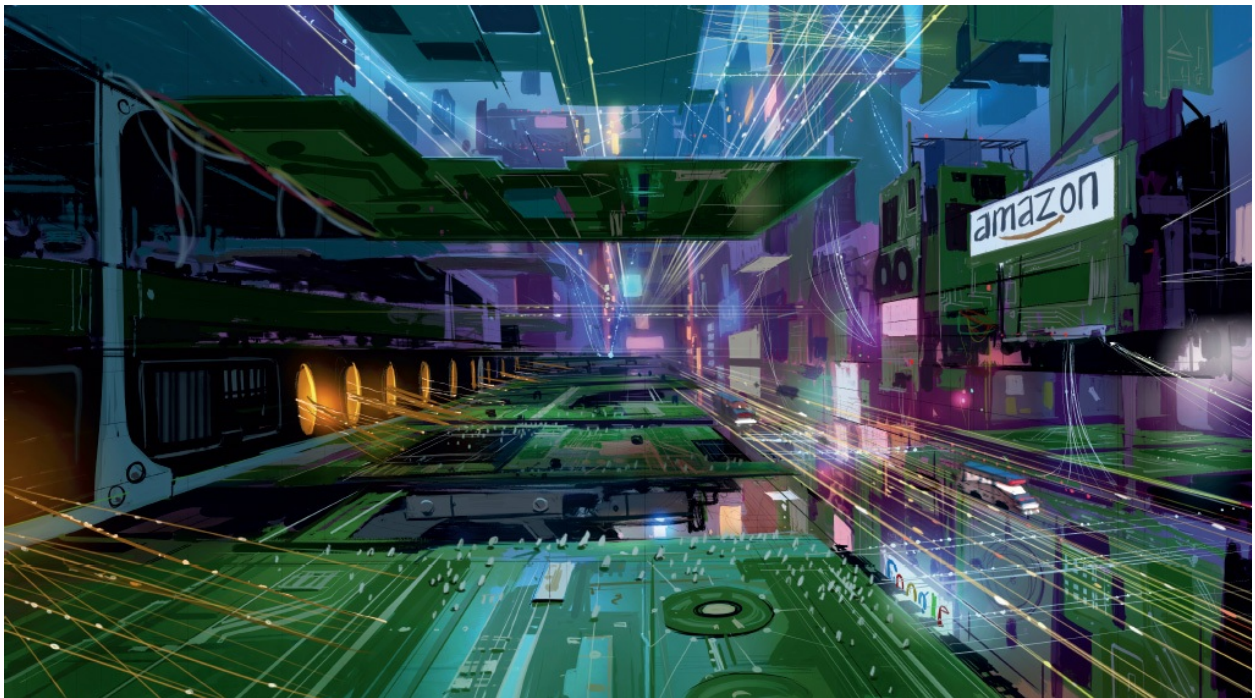
<Mike Yamada / digital>



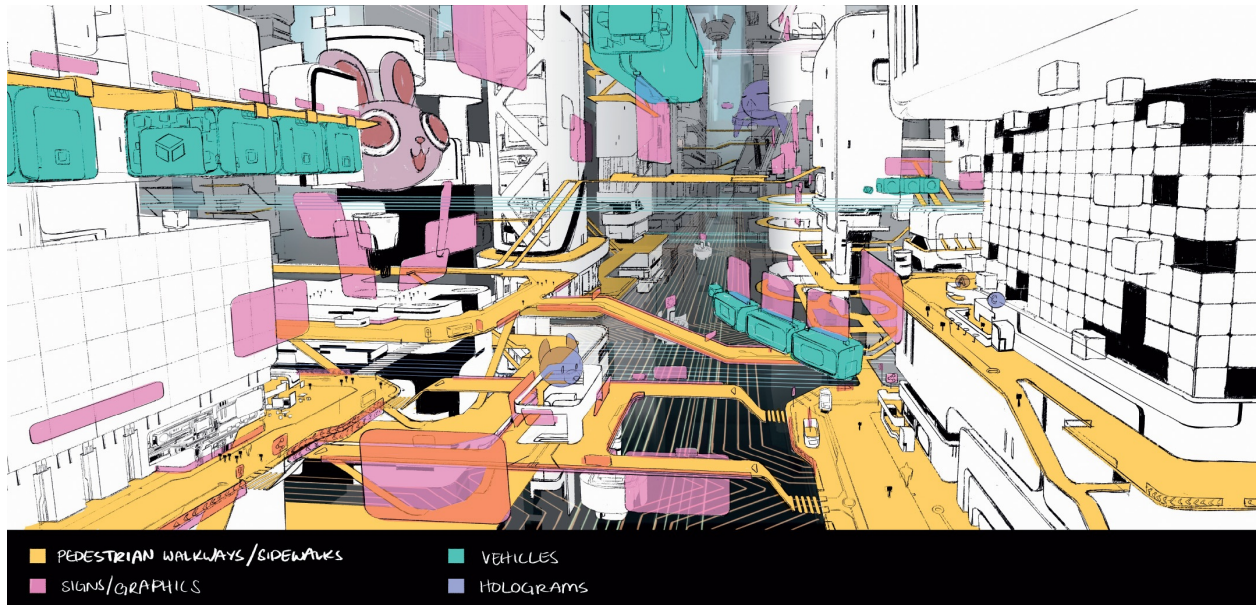
<Mike Yamada / digital>



<Jim Martin / digital>



<Paul Felix / digital>



<Mingjue Helen Chen / digital>



<Peter DeMund / digital>



<Mike Yamada / digital>



<Paul Felix / digital>



Matthias Lechner

Art Director, Environments · 



Our depiction of eBay shows multiple levels of floors filled with colorful auction blocks. Blocks represent general categories—clothes, sports equipment, games—and the boxes themselves have individual items for sale. It's visually straightforward, and combined with the noise from all the bidding, it feels like organized chaos.



Jim Reardon and 14 others

7 Comments



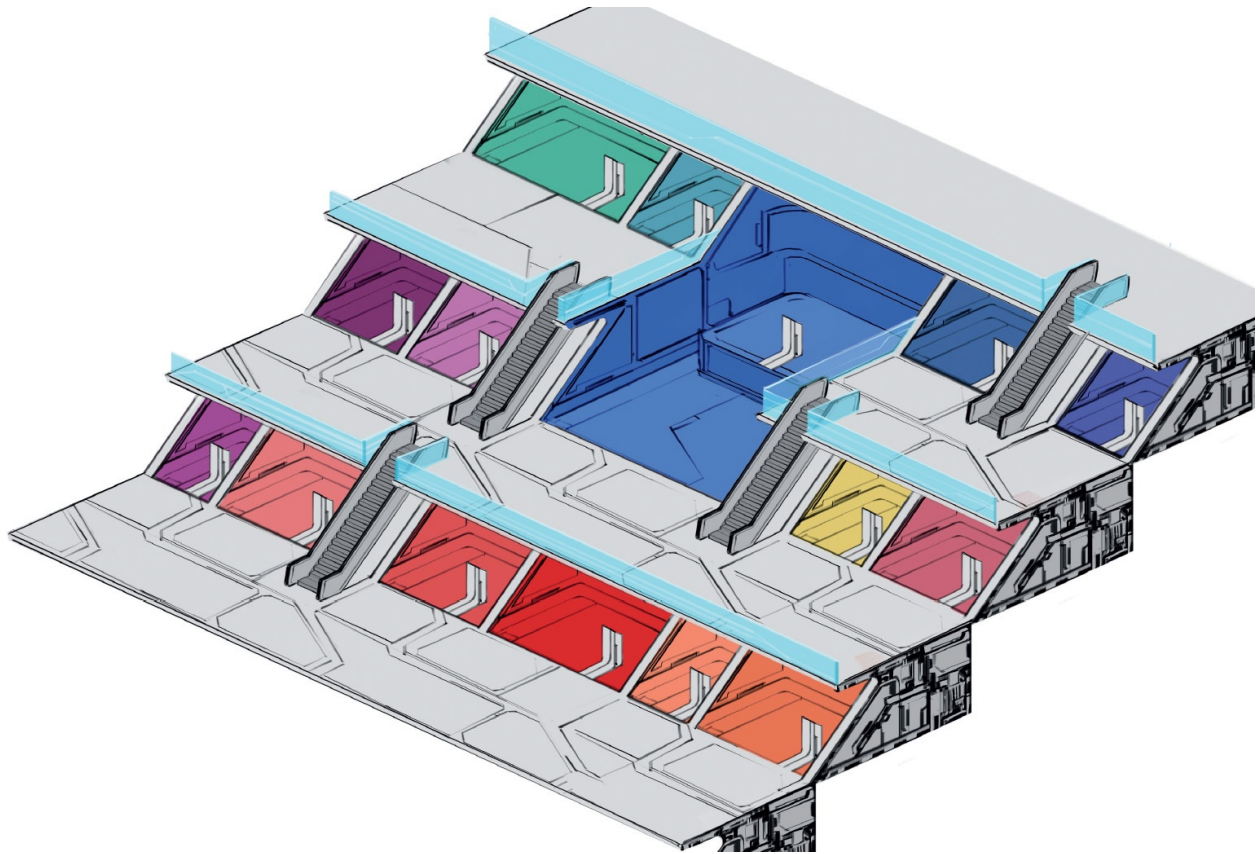
Like



Comment



Share



<Ryan Lang / digital>



<Mike Yamada / digital>



<Mike Yamada / digital>



Matthias Lechner

Art Director, Environments · 



Auction boxes have a hologram of the item, the price, the number of bids, and a timer, similar to what you would find on the actual website. When either the time runs out or the item is sold, a digital curtain closes and the next item goes on auction.



Mehrdad Isvandi and 28 others

15 Comments



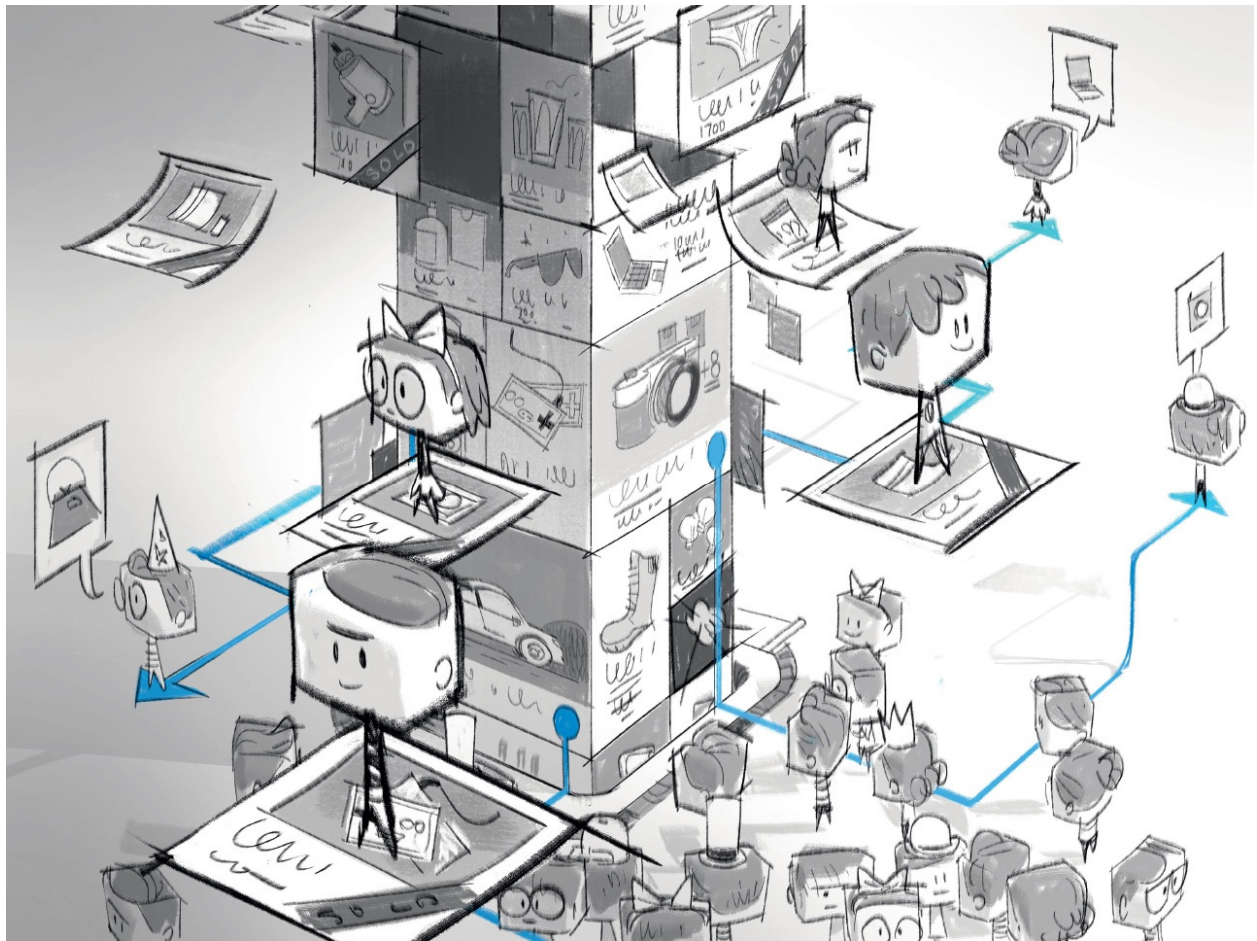
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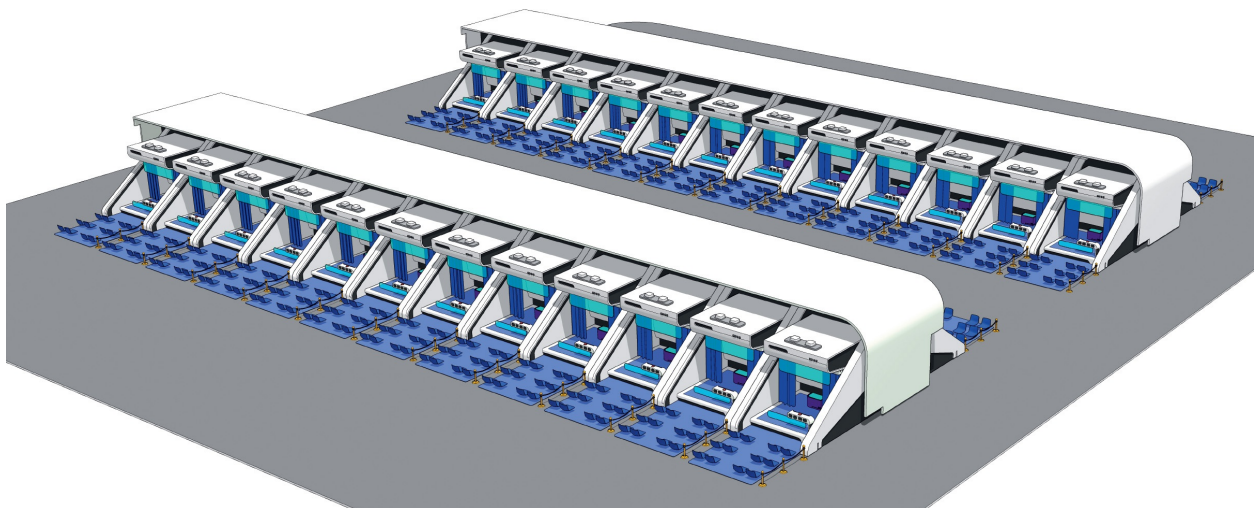
Comment



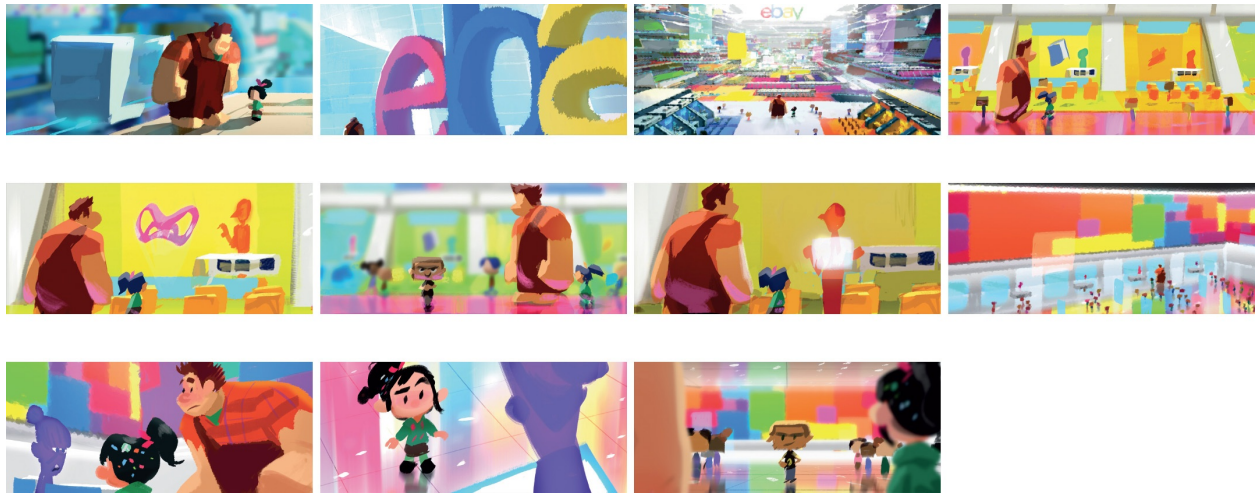
Share



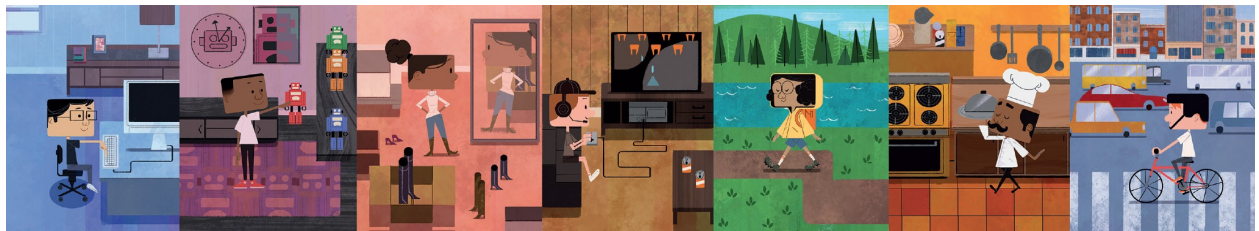
<Mike Yamada / digital>



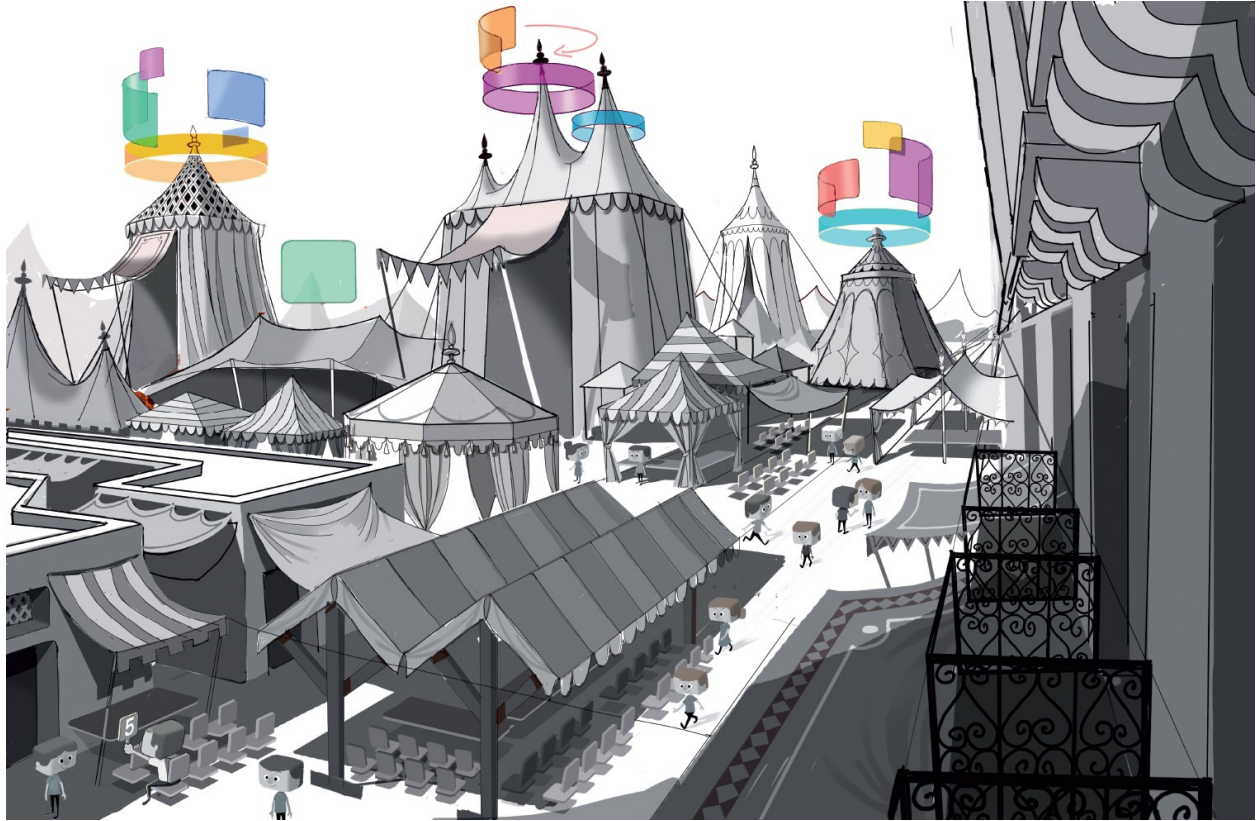
<Matthias Lechner / digital>



<Mingjue Helen Chen / digital>



<Ryan Lang / digital>



<Mac George / digital>



Cory Loftis

Production Designer · 🌐



When we start a design, it can be tough to decide what's important. Our eBay design started as a more curvy, architectural, inventive space but the story was about what was happening at the auction, so the site became more functional to keep the audience focused on the items and the auctioneers.



Ami Thompson and 26 others

4 Comments



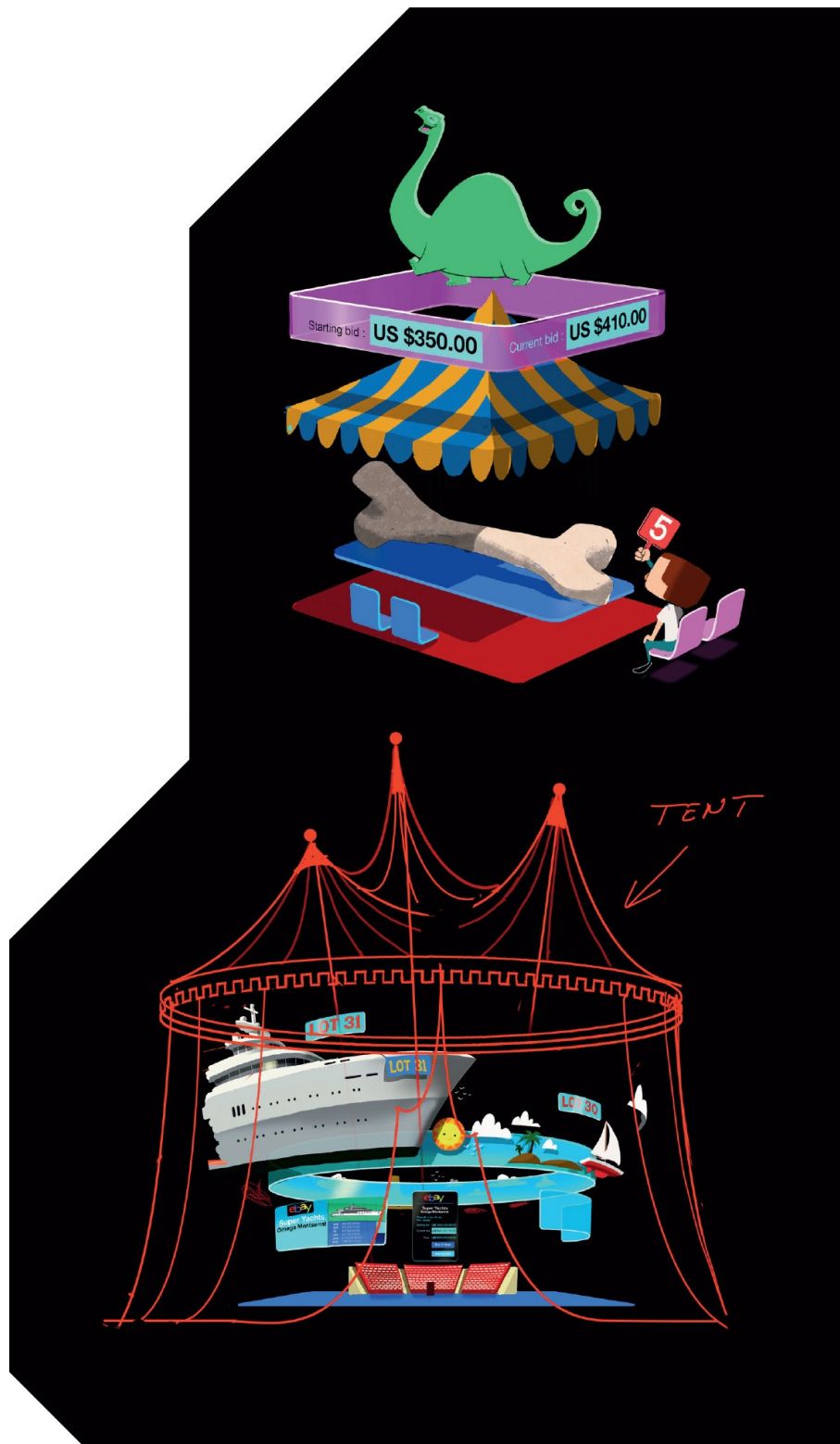
Like



Comment



Share



<Mac George / digital>



<Justin Cram / digital>



<Kevin Nelson / digital>



Matthias Lechner

Art Director, Environments · 🌐



We initially thought of Google as a gigantic call center that sits at a major intersection of the data stream. When a user asks a question, a netizen searches the Internet by filtering the data stream that flowed into the site.



Clark Spencer and 15 others

7 Comments



Like



Comment



Share



<Mehrdad Isvandi / digital>



Matthias Lechner

Art Director, Environments · 🌐



YouTube in this movie is a like a multiplex cinema. The exterior resembles a giant cathode ray tube television set. Inside are rows and rows of single-person screening rooms.



Josie Trinidad and 22 others

13 Comments



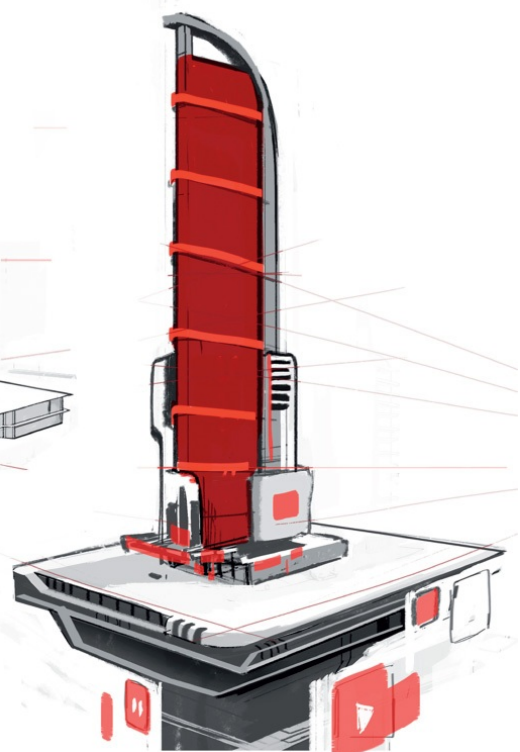
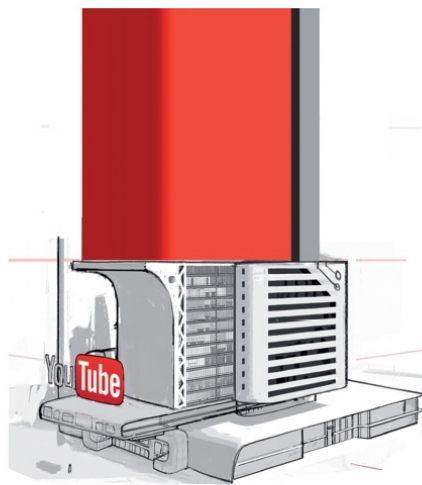
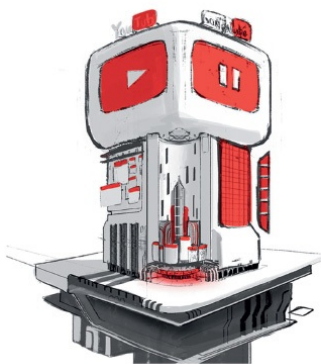
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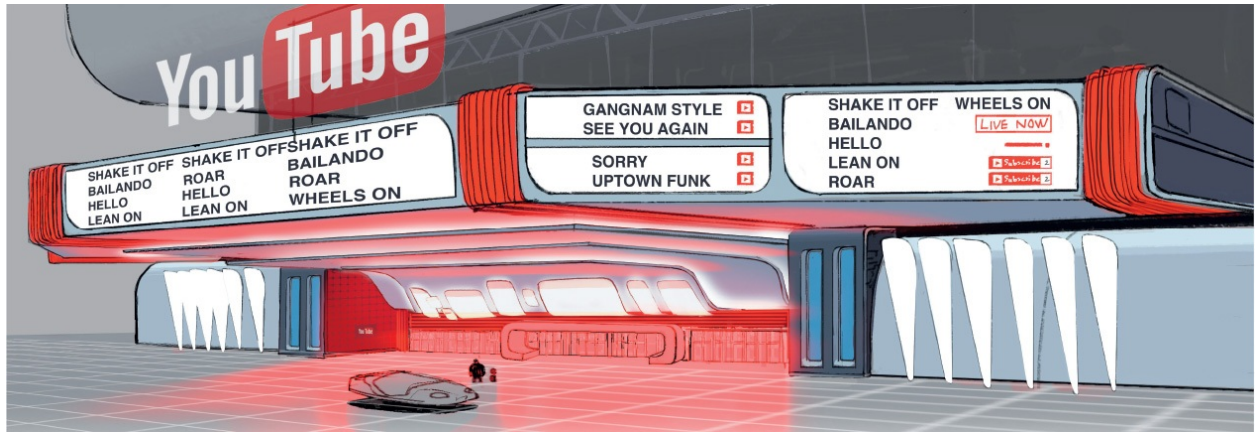
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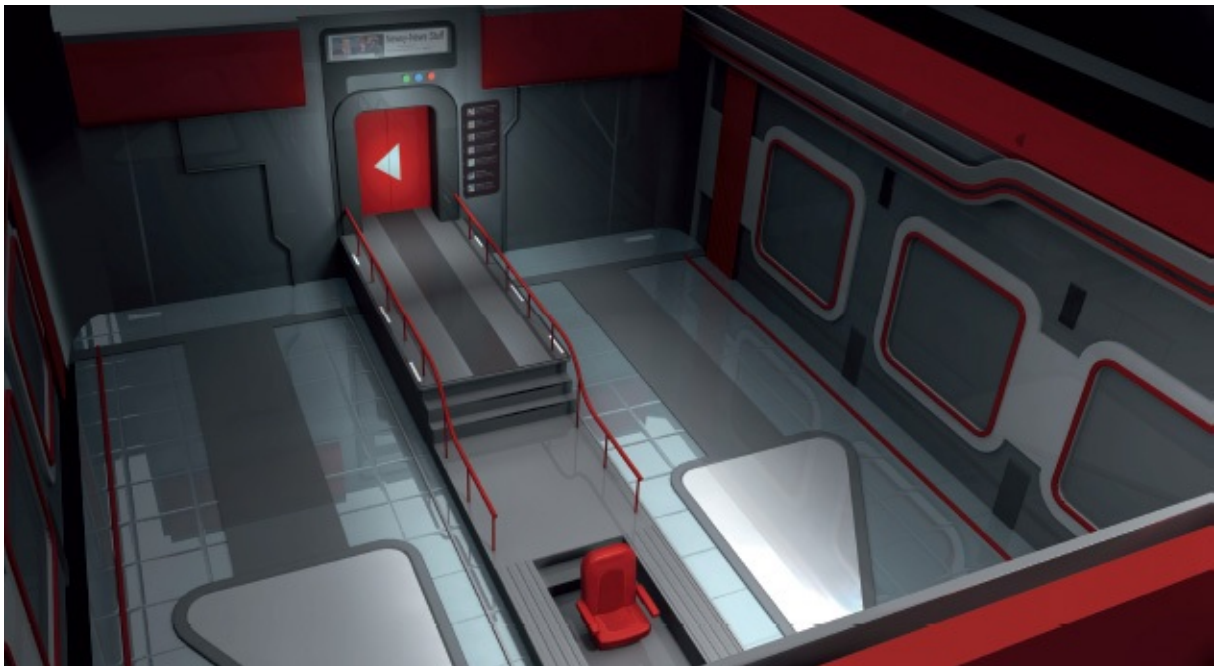
Share



<Mehrdad Isvandi / digital>



<Mehrdad Isvandi / digital>



<Jim Martin / digital>



<Jim Martin / digital>



<Matthias Lechner / digital>



Cory Loftis

Production Designer · 



The real-world analogy for Facebook is a person handing you a photograph or reading a newspaper. But what Facebook feels like is having a conversation with your friends or having reporters from all over the world do a custom newscast just for you. We tried to capture what it feels like.



Scott Kersavage and 19 others

5 Comments



Like



Comment



Share



<Matthias Lechner / digital>



<Kevin Nelson / digital>



<Mehrdad Isvandi / digital>



Mehrdad Isvandi

Visual Development Artist · 🌐

Our version of Instagram was designed to look like a museum. There are millions of pictures and framed art pieces lining the walls.



Rich Moore and 26 others

8 Comments



Like



Comment



Share



<Kevin Nelson / digital>



Matthias Lechner

Art Director, Environments · 🌐



The film's version of Amazon looks like a monolithic structure made out of cardboard boxes. Swarms of drones travel in and out from all directions, looking for items users are buying.



Renato Dos Anjos and 35 others

17 Comments



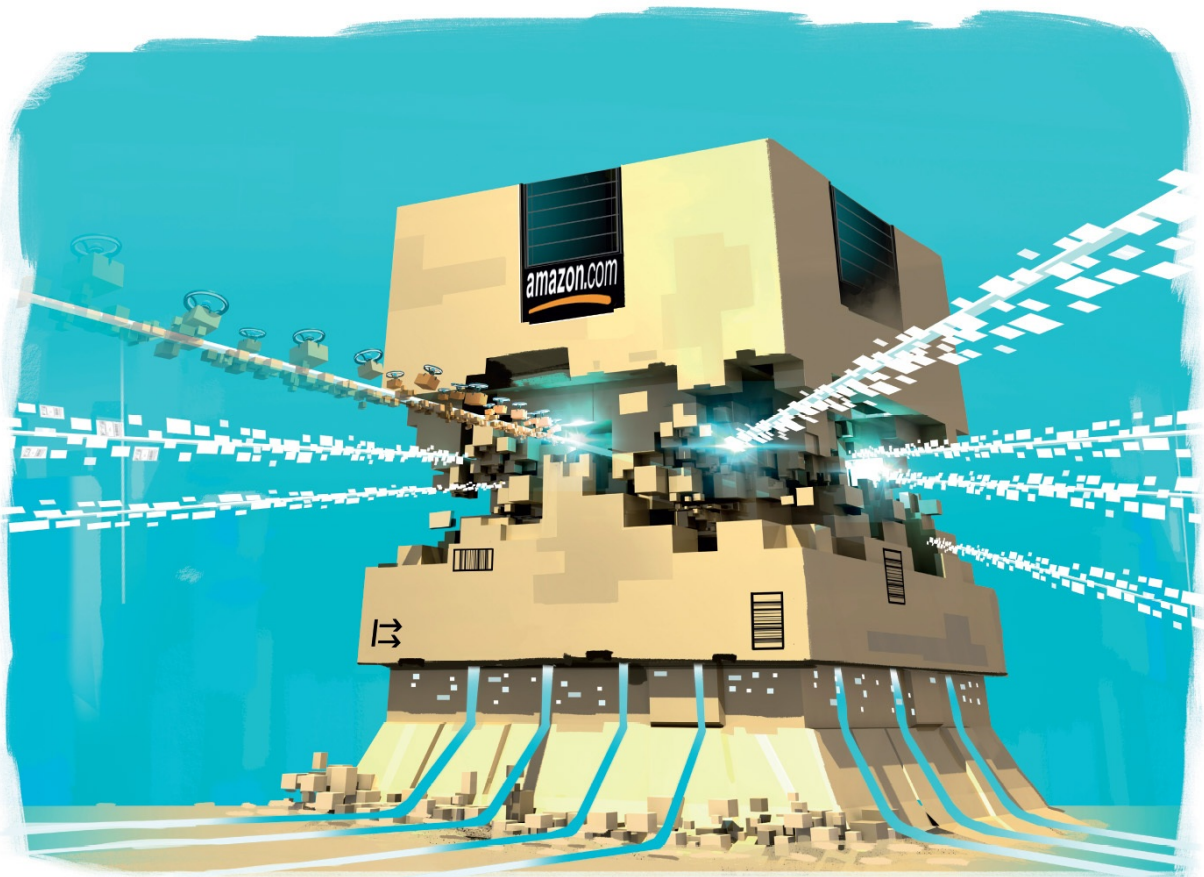
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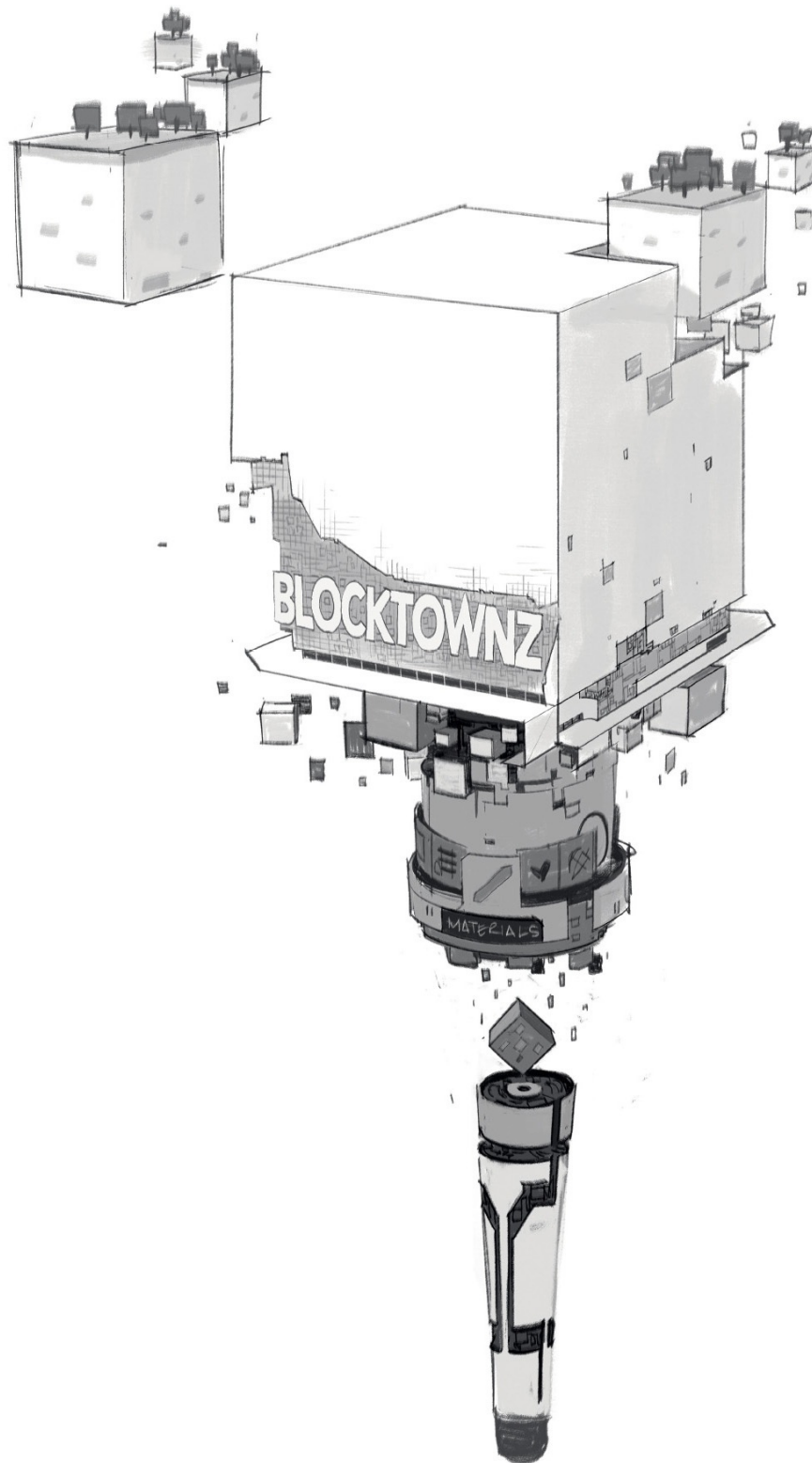


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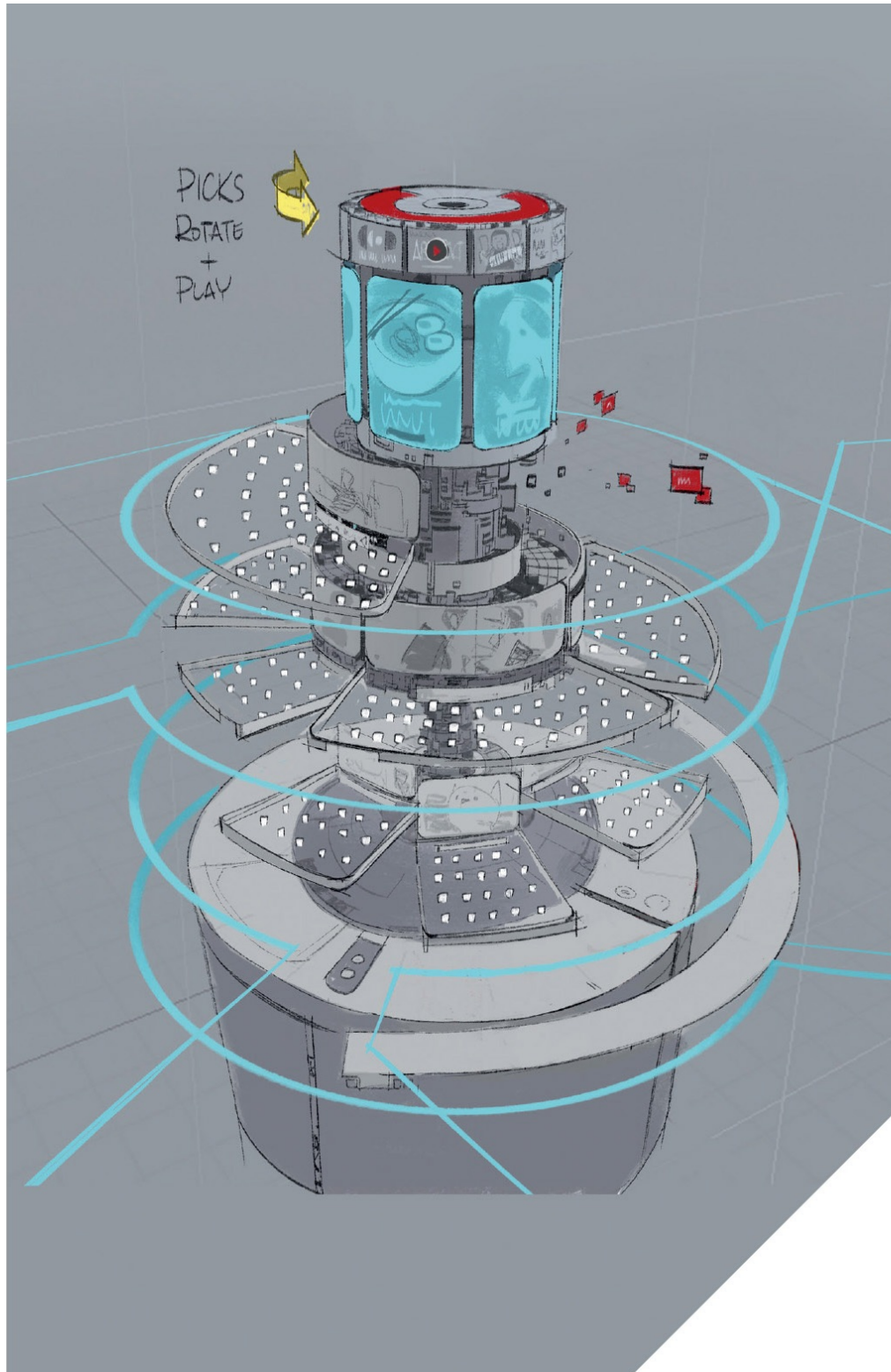


© 2016 Matthias Lechner / Art Director

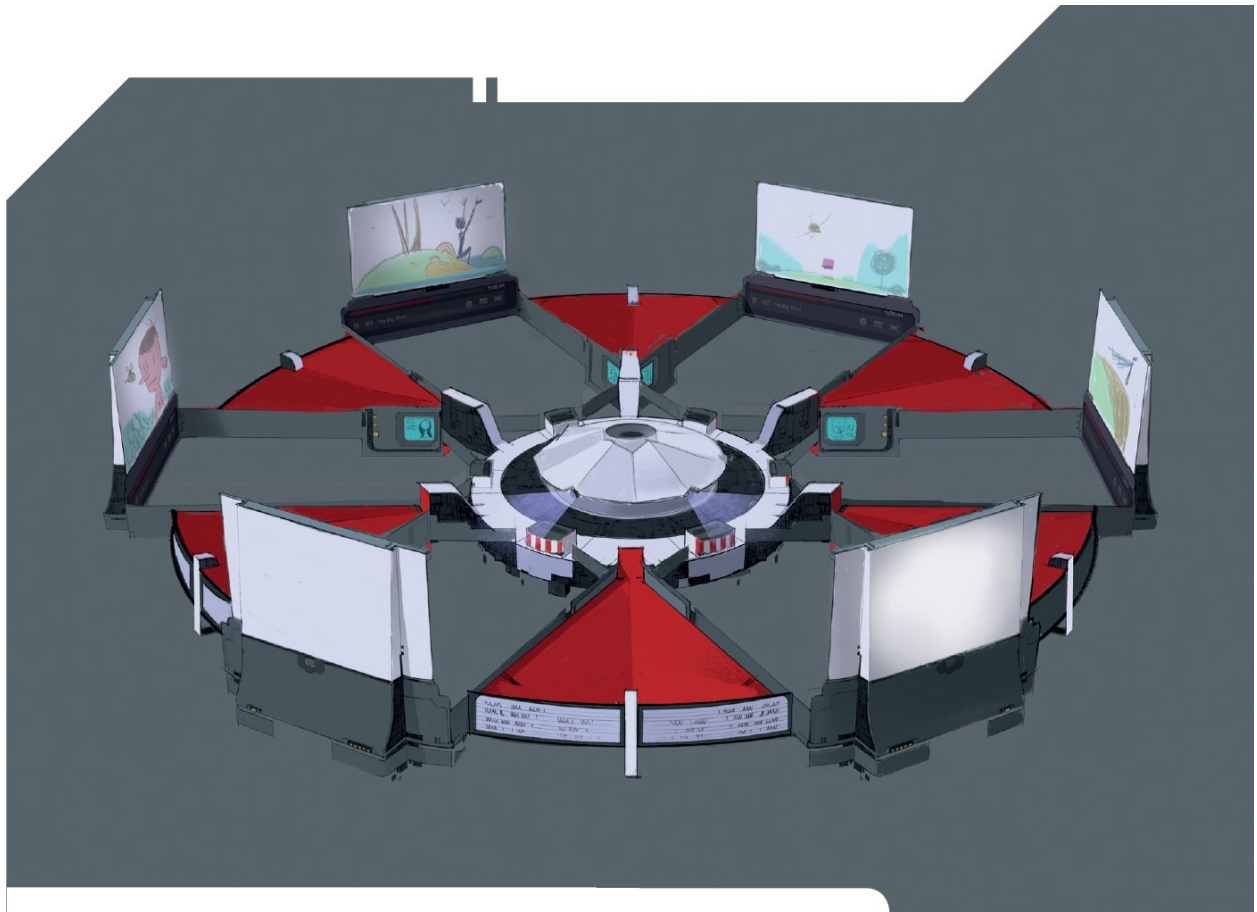
<Jim Martin / digital>



<Mike Yamada / digital>



<Mike Yamada / digital>



<Mike Yamada / digital>



Matthias Lechner

Art Director, Environments · 🌐



We depicted Netflix as a drive-in movie theater but on a huge scale, with screens on many levels.



Mike Yamada and 22 others

18 Comments



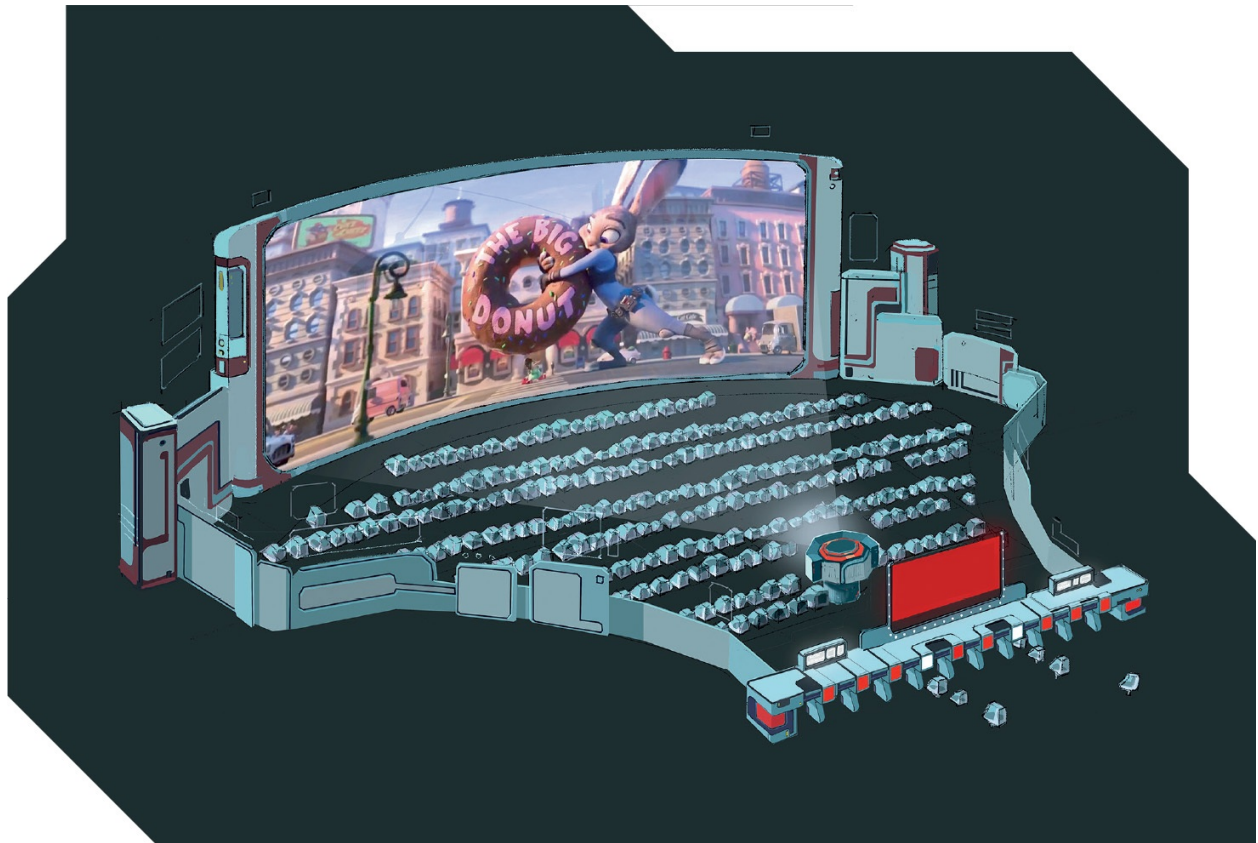
Like



Comment



Share



<Armand Serrano / digital>



<Mike Yamada / digital>



<Mingjue Helen Chen / digital>



Matthias Lechner

Art Director, Environments · 



The look of Snapchat is inspired by the company logo. To represent the ephemeral nature of its messages, we added an effect of appearing and disappearing shapes.



Kira Lehtomaki and 17 others

10 Comments



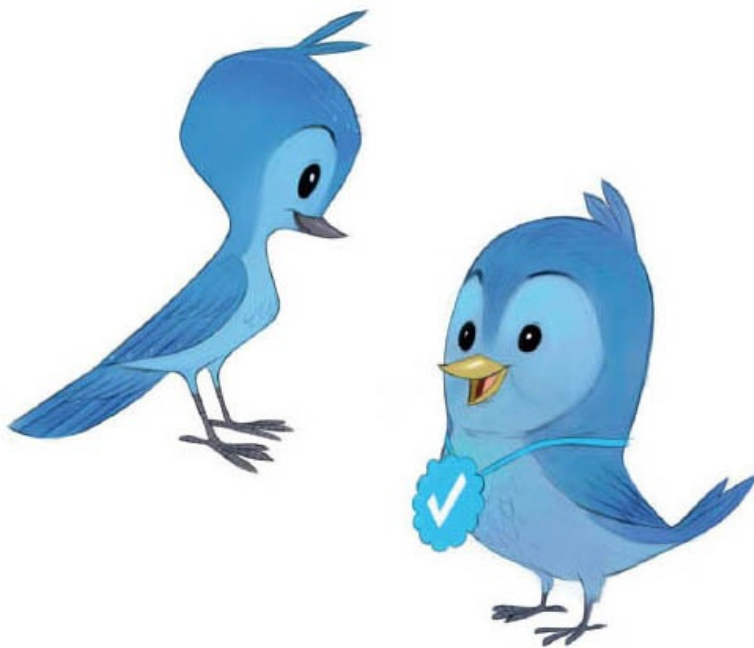
Like



Comment



Share



<Cory Loftis / digital>



Matthias Lechner

Art Director, Environments · 🌐

We tried many ideas for Twitter: a birdcage, an aviary, a giant tree with birds sitting on little hashtags like they're swings. And blue messenger birds are present throughout our Internet, like pigeons in a city.



Nathan Warner and 22 others

6 Comments



Like



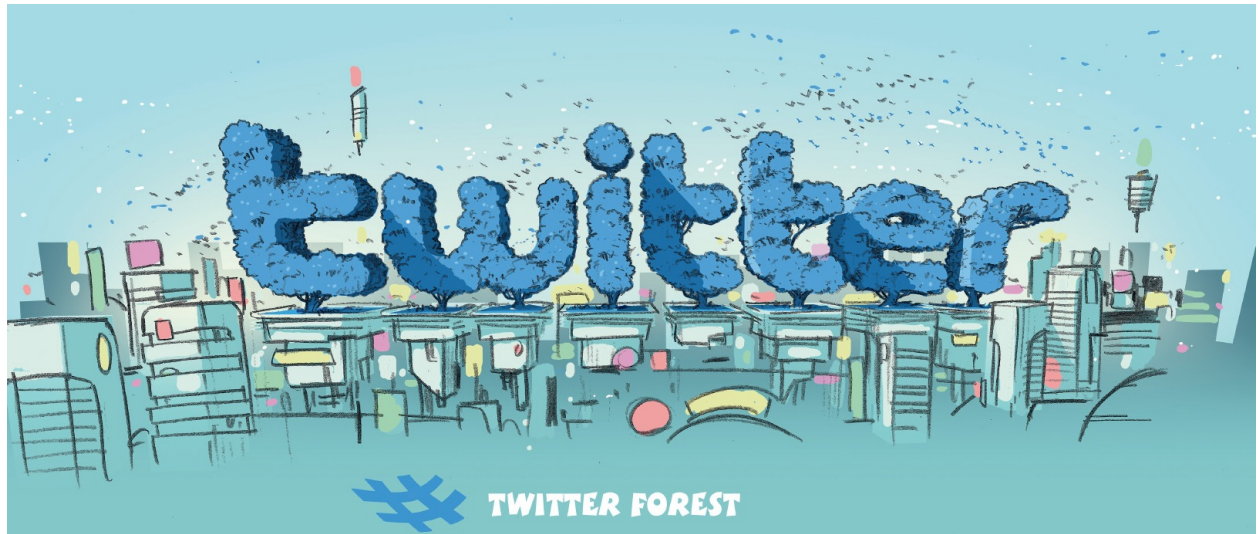
Comment



Share



<Cory Loftis / digital>



<Matthias Lechner / digital>

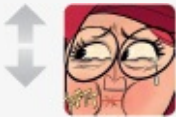
VISUAL NOISE



[–] **Jessica Julius** Author

One of the biggest creative and technical challenges of this film is how many screens there are. How did you tackle that?

[permalink](#) [embed](#)



[–] **Ami Thompson** Art Director, Characters The environment had to look like a big city filled with all kinds of signs, videos, advertisements, and graphics.

[permalink](#) [embed](#) [parent](#)



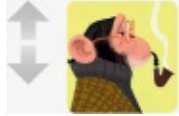
[–] **Ernest Petti** Technical Supervisor We've depicted screens in films before but never this many. And they're all different sizes and shapes, all showing different video or images.

[permalink](#) [embed](#) [parent](#)



[–] **Scott Kersavage** Visual Effects Supervisor Everything you see on those screens is an insert shot. In most films we have maybe a couple hundred insert shots, but here we had to represent tens of thousands of screens in a single frame. Every department collaborated to do it.

[permalink](#) [embed](#) [parent](#)



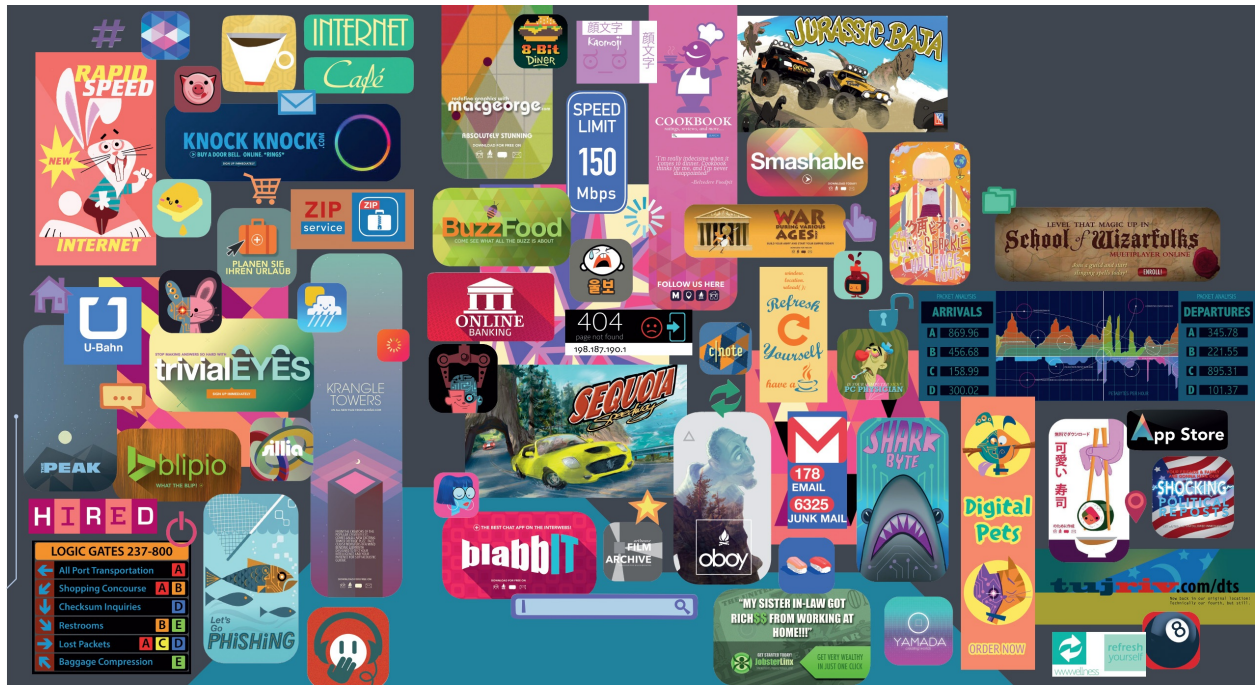
[–] **Cory Loftis** Production Designer Artists from different departments created every meme, gif, video, and image. Since we're trying to recreate the Internet, we didn't put too many rules on what they could do. It was whatever came out of the artists' heads.

[permalink](#) [embed](#) [parent](#)



[–] **Nick Orsi** Visual Development Artist There's a little bit of everything in there: clips from Disney movies, caricatures of each other, graffitied puns in computer code. There are so many background jokes and visual gags in there. And, of course, cat videos.

[permalink](#) [embed](#) [parent](#)



<Various Artists / digital>



Ernest Petti, Technical Supervisor

The Internet holds an overwhelming amount of stuff—it's filled with people, data, traffic—and we had to show that on-screen. The number of crowd characters in other films peaks at around five or six thousand. A single test shot in this film had 50,000 crowd characters.

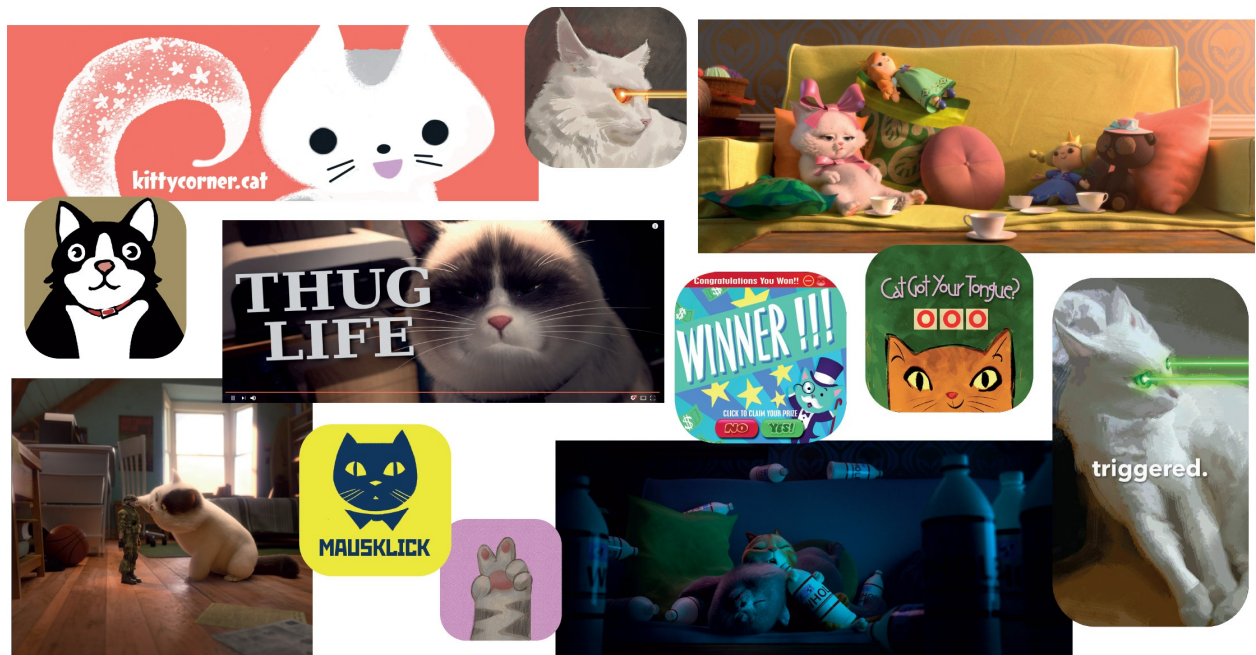


<Various Artists / digital>

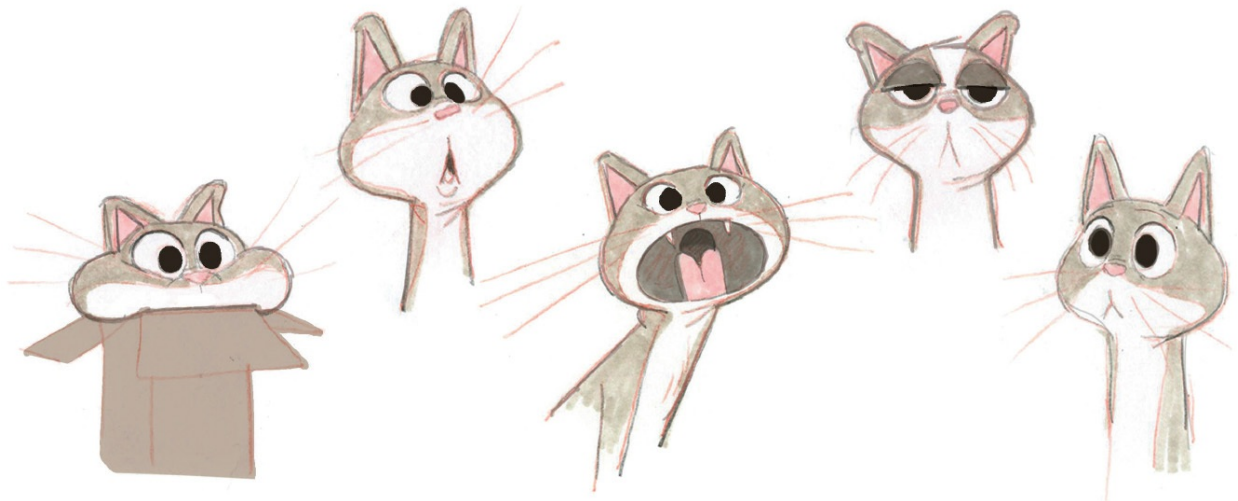


Nathan Warner, Director of Cinematography, Layout

Internet videos are often recorded with smartphone cameras, which have a different motion and orientation than a film camera. They feel handheld, twitchy, vertical. Characters often break frame and the person filming overcorrects and has to come back. Everyone knows what a phone camera feels like because we see it every day, but it's difficult to recreate that style deliberately.



<Various Artists / digital>



<Nicholas Orsi / digital>



Ami Thompson, Art Director, Characters

Cats are such a big thing on the Internet, so to provide a variety of design choices we created a basic cat design we could modify for various needs—long hair, short hair, fat, skinny. Mochi, the cat from *Big Hero 6*, appears.



<Scott Watanabe / digital>



Cory Loftis, Production Designer

In addition to the smaller signage, there are larger animated holograms that move down streets or between websites. The lighting team helped find the right balance between signs and buildings.



<Mike Yamada / digital>



<Mike Yamada / digital>

GETTING AROUND



[–] **Jessica Julius** Author

How do users and netizens move around the Internet?

[permalink](#) [embed](#)



[–] **Matthias Lechner** Art Director, Environments The roads are light bands that turn at 45-degree angles so they're reminiscent of a motherboard. Little cars attach to the light bands like electrons—these are the linkcars.

[permalink](#) [embed](#) [parent](#)



[–] **Cory Loftis** Production Designer A user hops in a linkcar to travel from website to website. Linkcars are self-driving and carry the user straight to wherever she wants to go. They travel at different speeds, so if you're still on DSL your linkcar goes slower than those on fiber-optic lines.

[permalink](#) [embed](#) [parent](#)



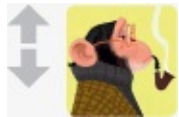
[–] **Matthias Lechner** Art Director, Environments Netizens' vehicles represent the sites they're from, the jobs they do. There are postal vans for delivering emails, a garbage truck for junk mail.

[permalink](#) [embed](#) [parent](#)



[–] **Mike Yamada** Visual Development Artist We created Internet versions of easily recognizable vehicles from the real world so that audiences could quickly process them and enjoy the joke.

[permalink](#) [embed](#) [parent](#)



[–] **Cory Loftis** Production Designer The world started to make sense as we designed the transportation.

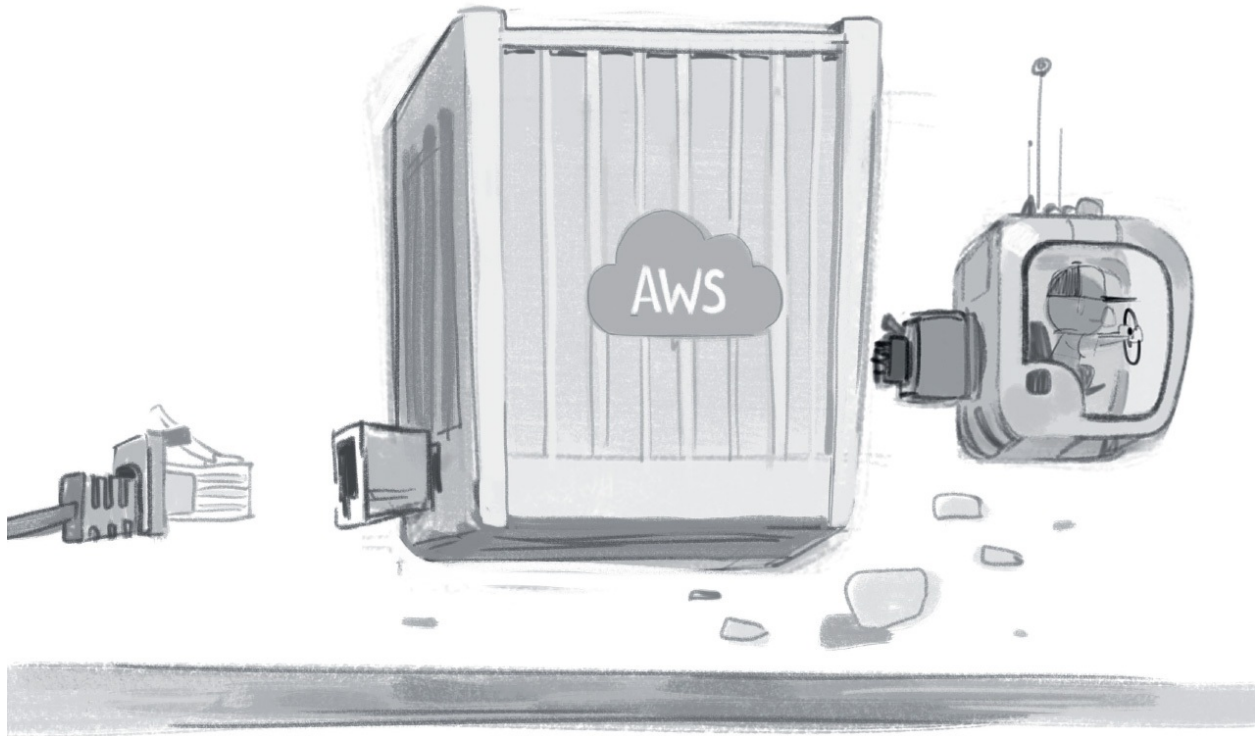
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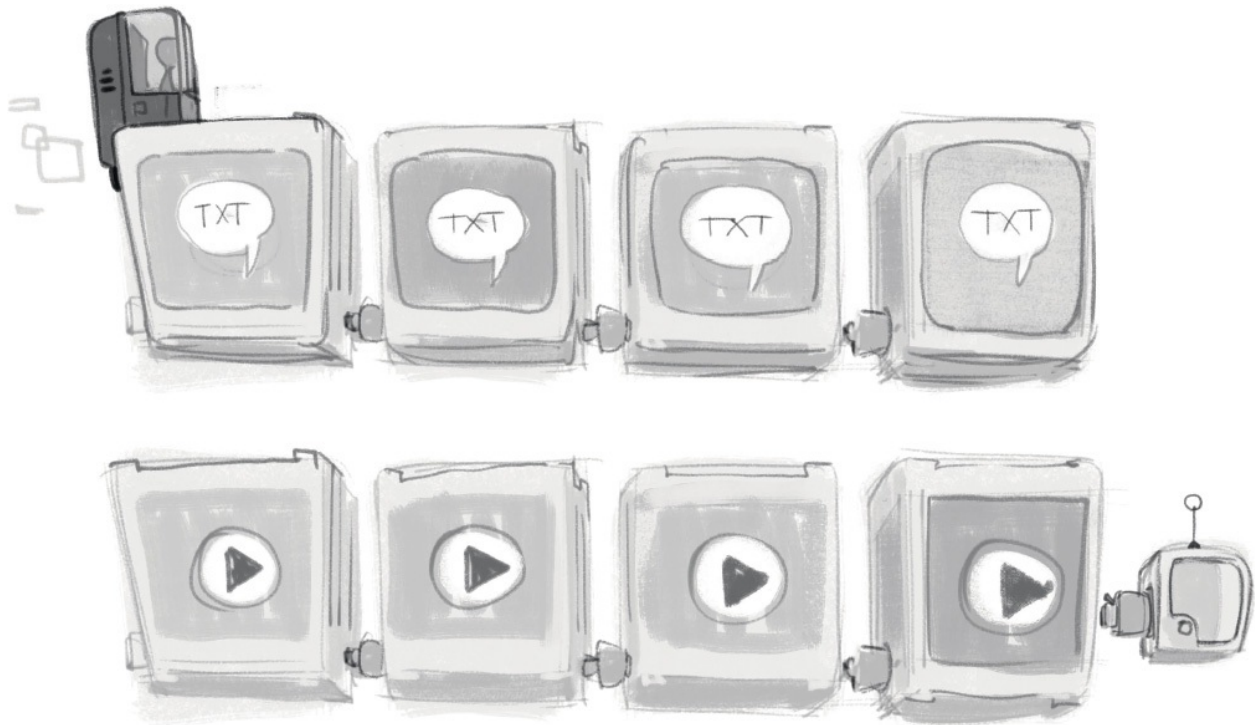
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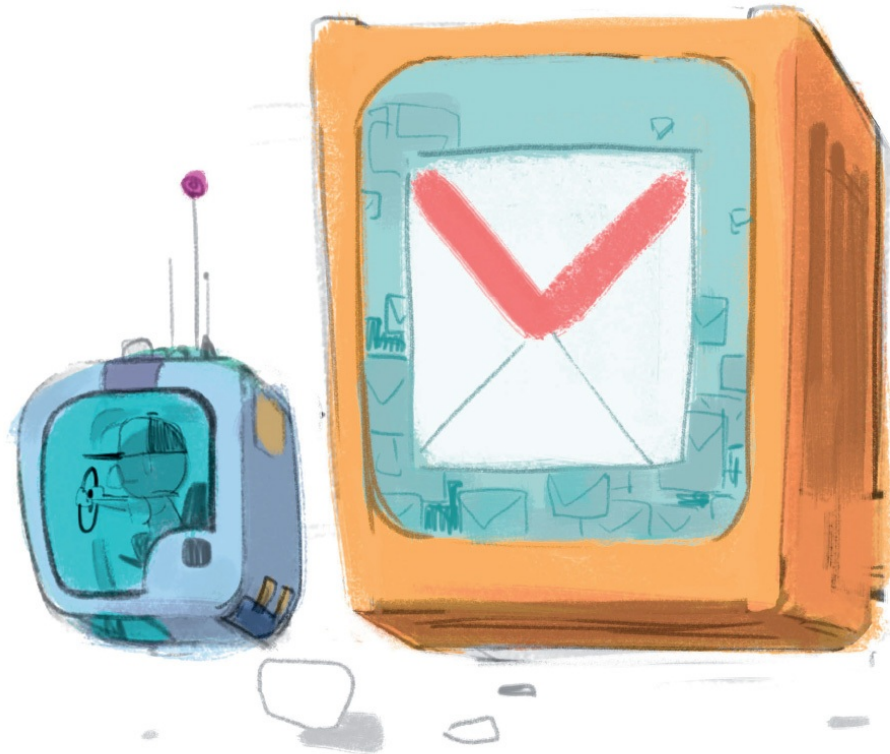
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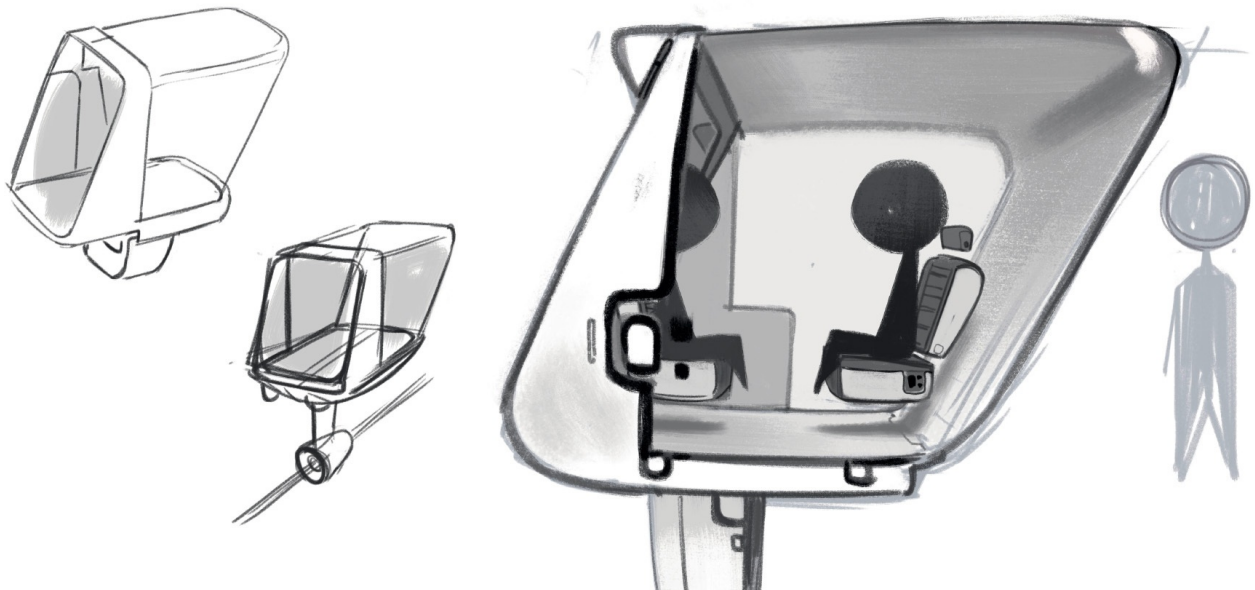
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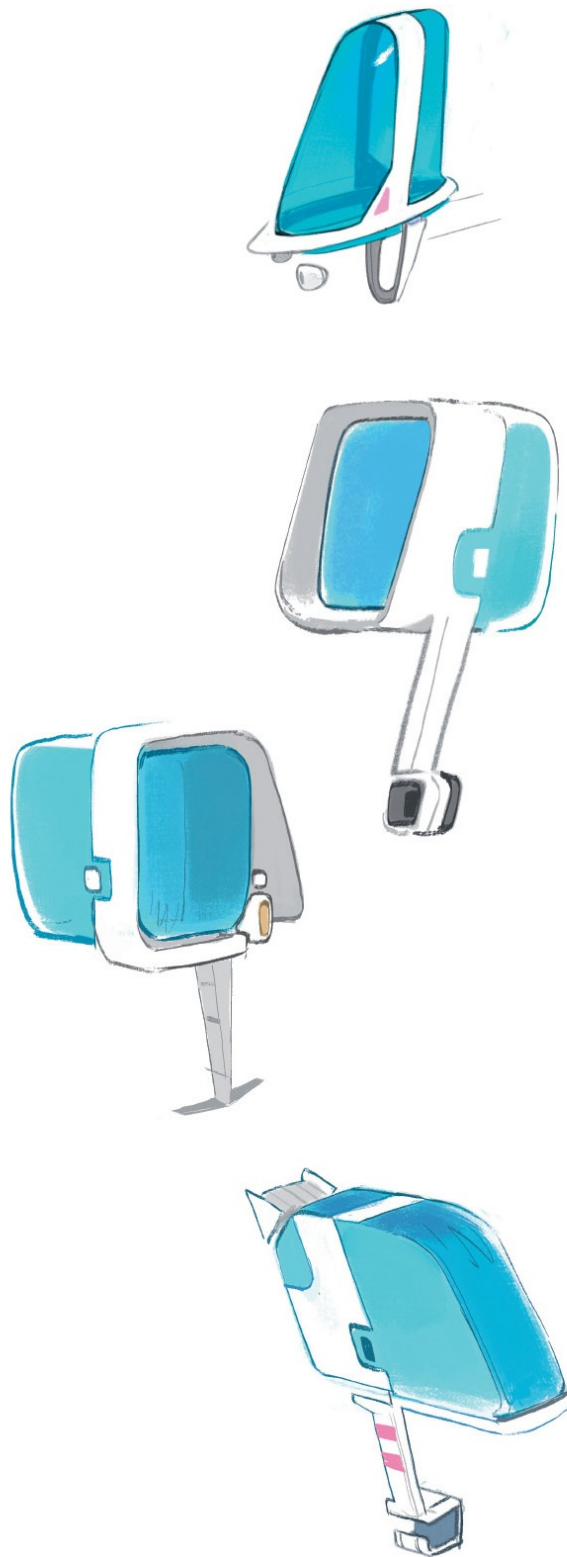
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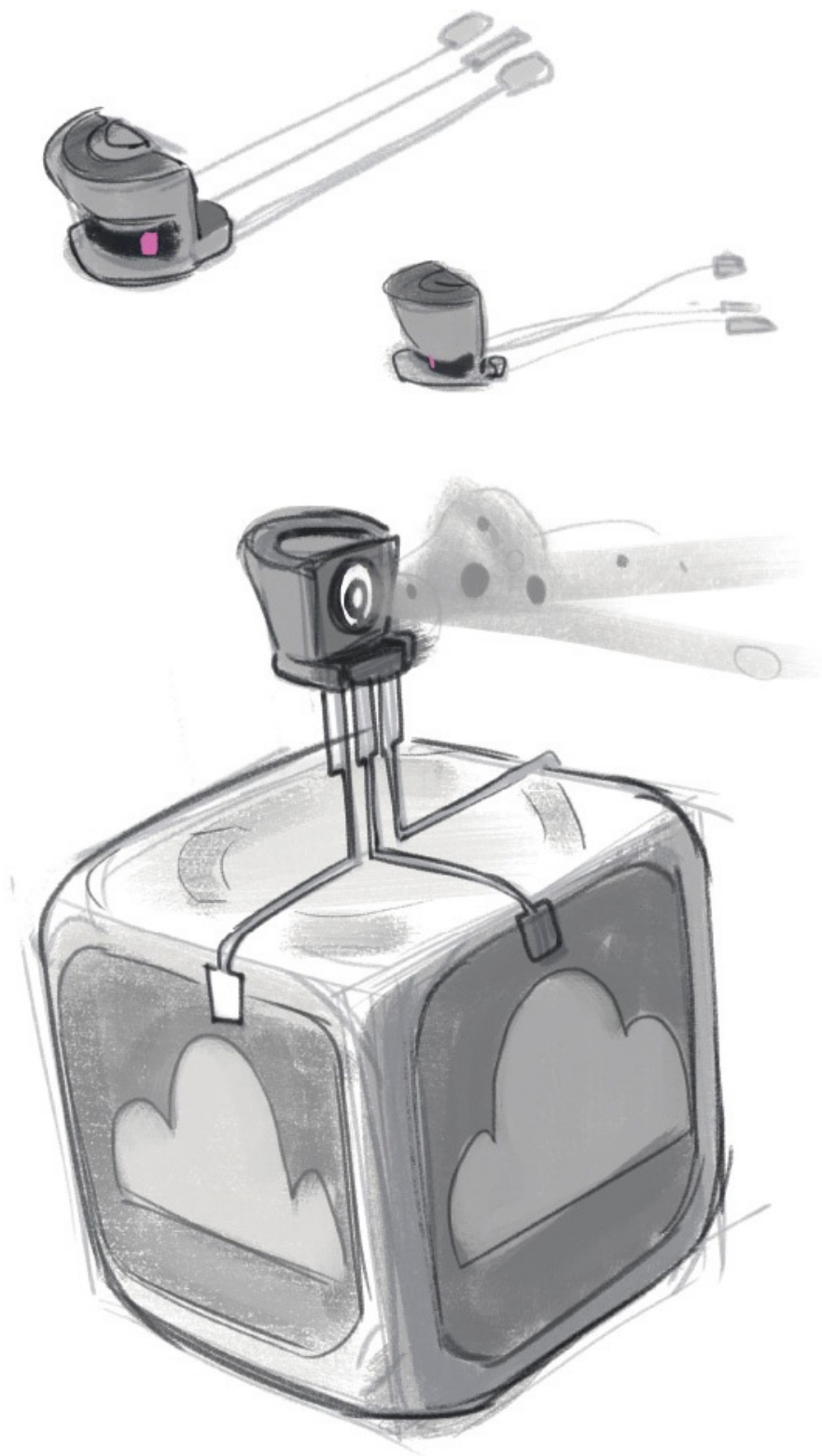
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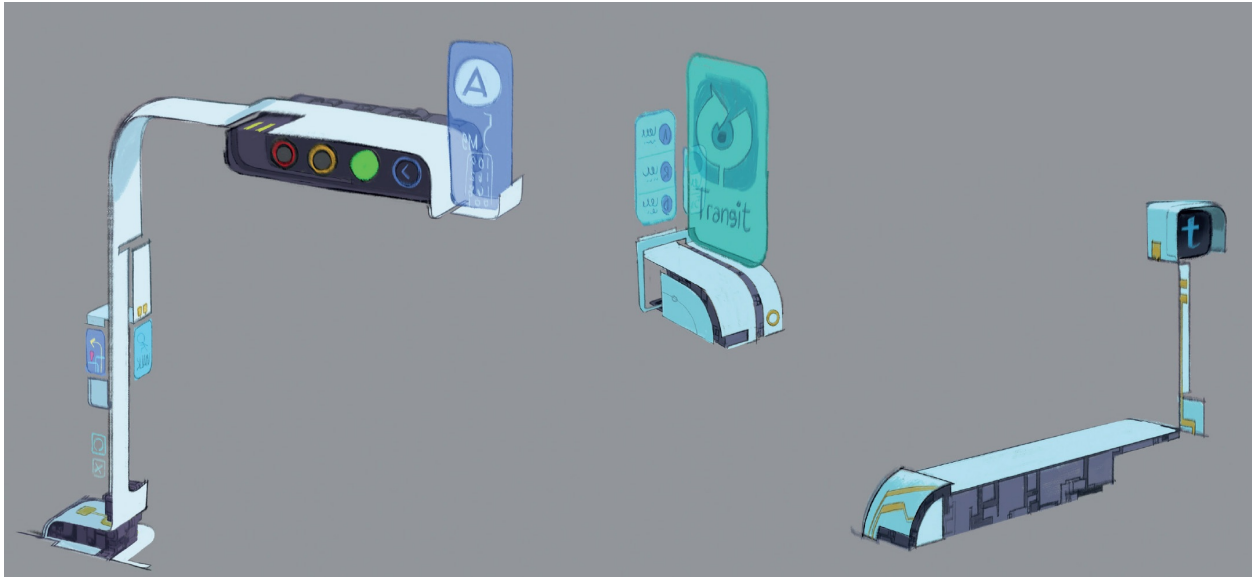
<Mike Yamada / digital>



<Paul Felix / digital>



<Mike Yamada / digital>



<Mike Yamada / digital>



Matthias Lechner  @ArtDirectorEnvironments

The traffic lights evoke the maximize, minimize, and close-out buttons at the top left of a window screen.

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<Ryan Lang / digital>



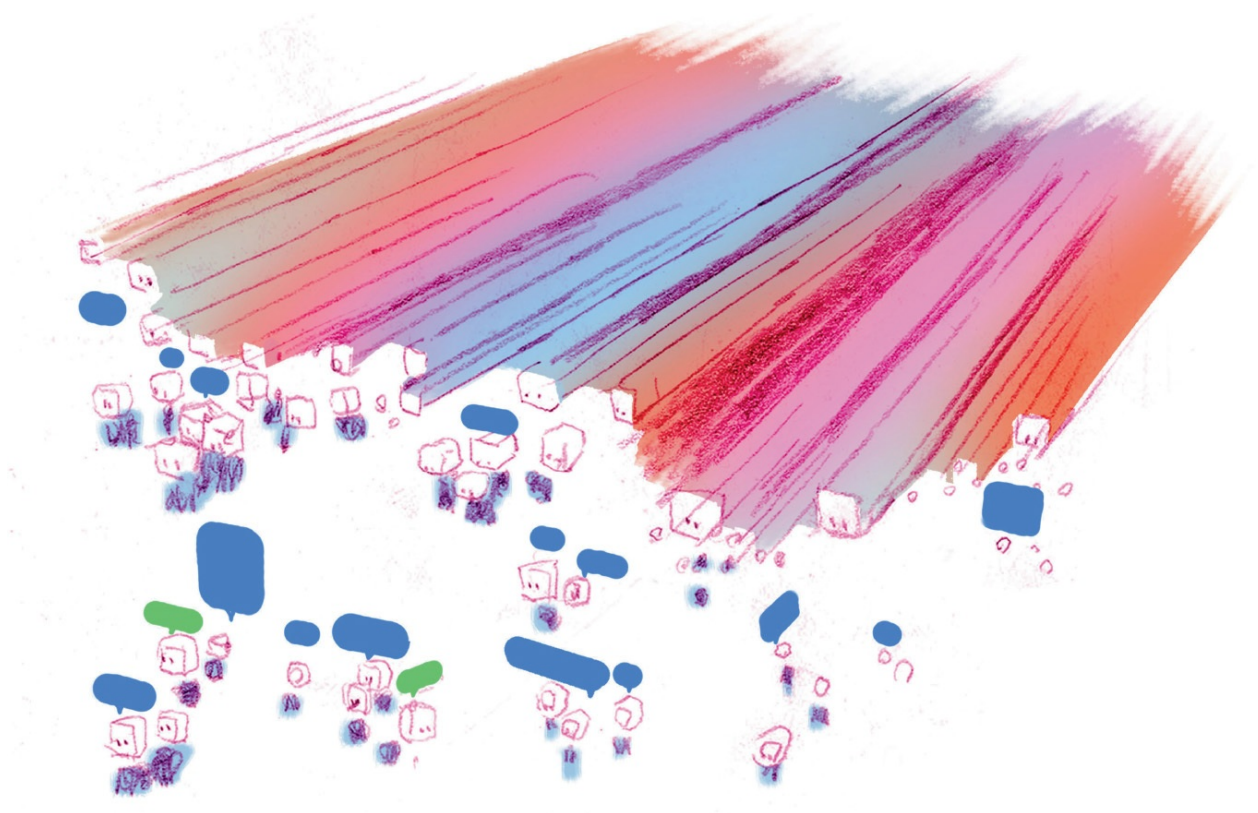
Cesar Velazquez  @HeadOfVisualEffects

We studied the physics of how data travels through a power line. Electromagnetic pulses move electricity like a wave, which we represented as magnetic rings that propel data forward along an electromagnetic wave.

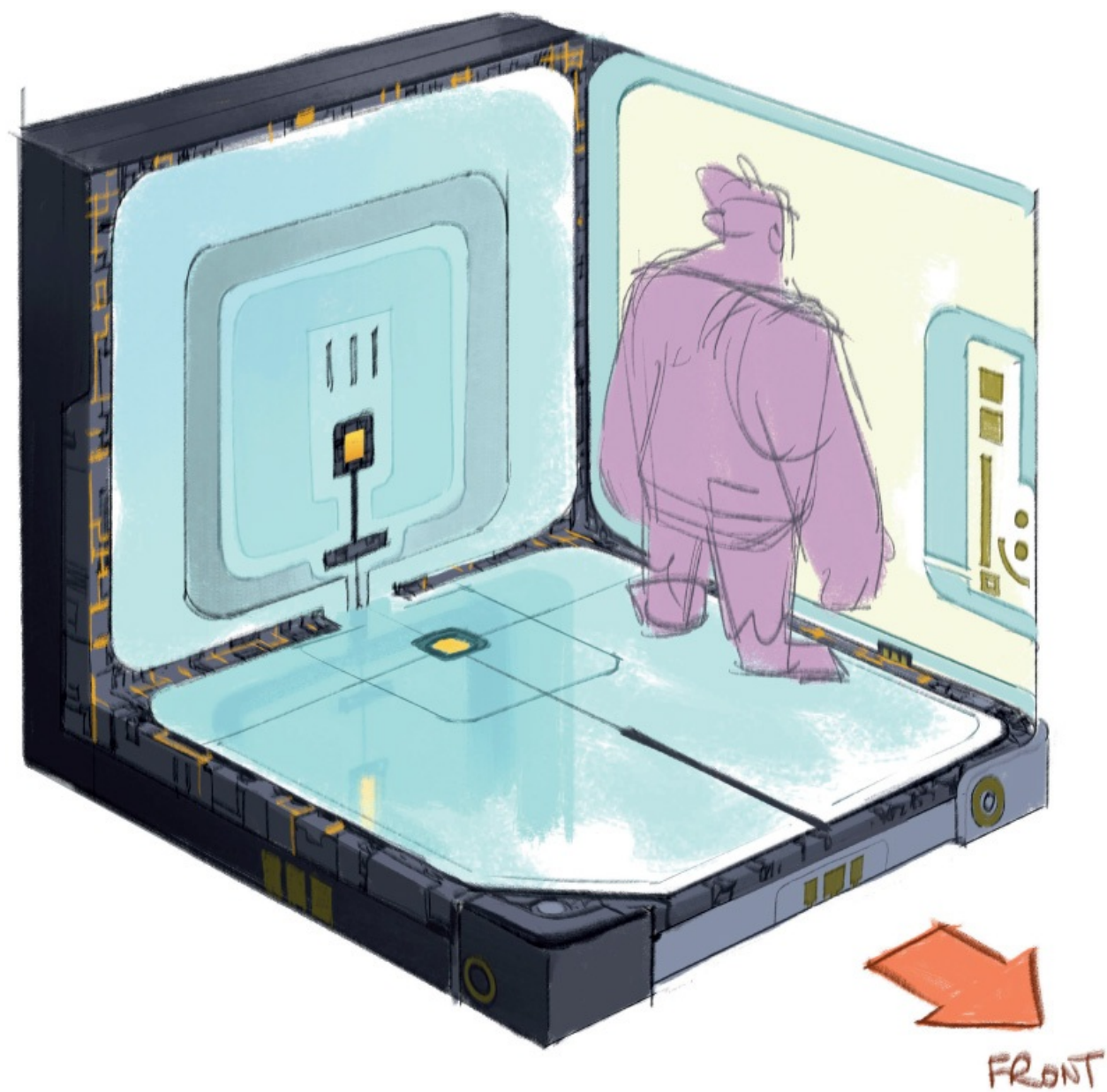
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<Nicholas Orsi / digital>



<Mike Yamada / digital>



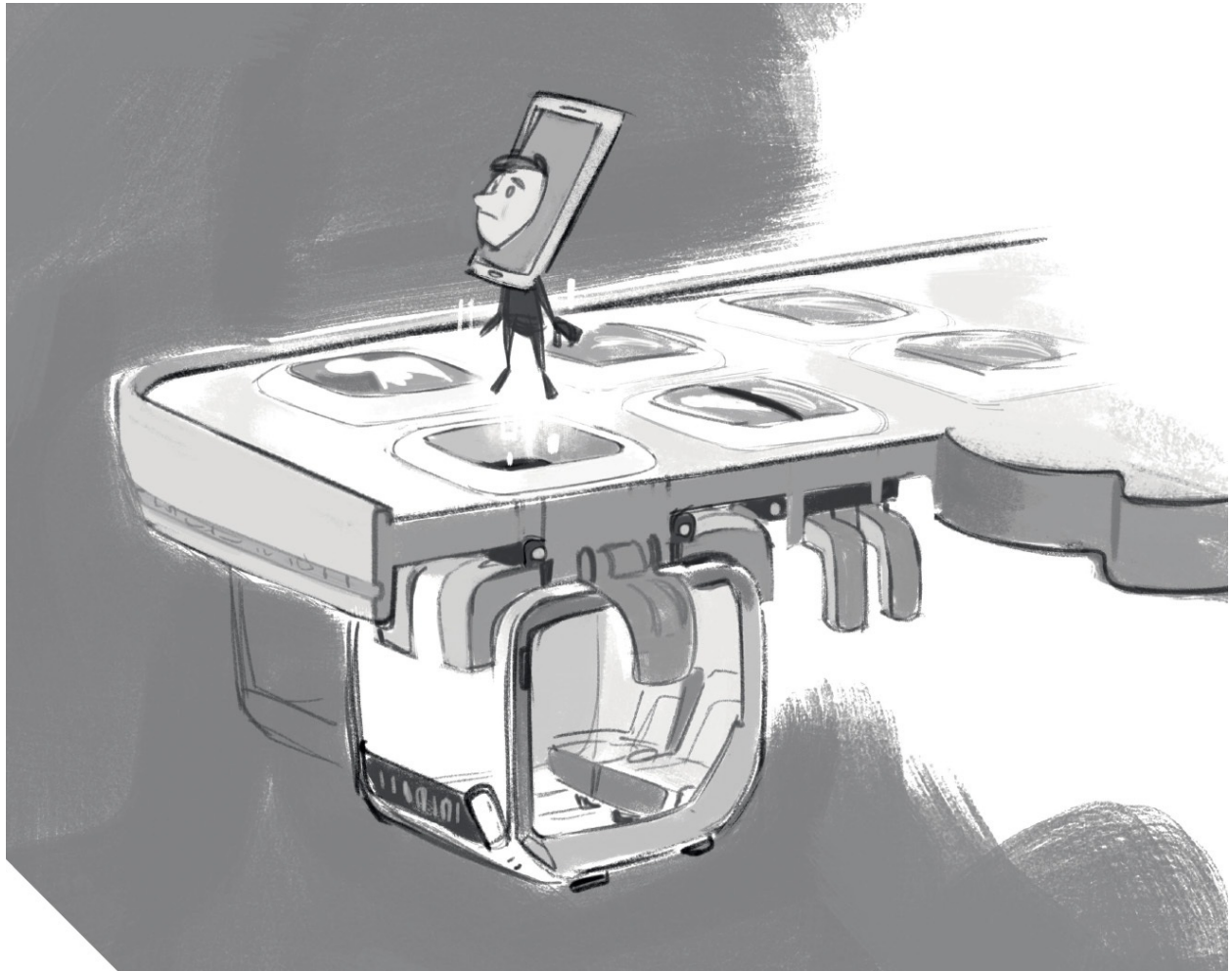
Cory Loftis  @ProductionDesigner

The Dial-Up Express used to be the only way to get around the Internet. It's an old steam-engine trolley car that makes that screechy modem sound as it moves along, only as quickly as the loading bars allow.

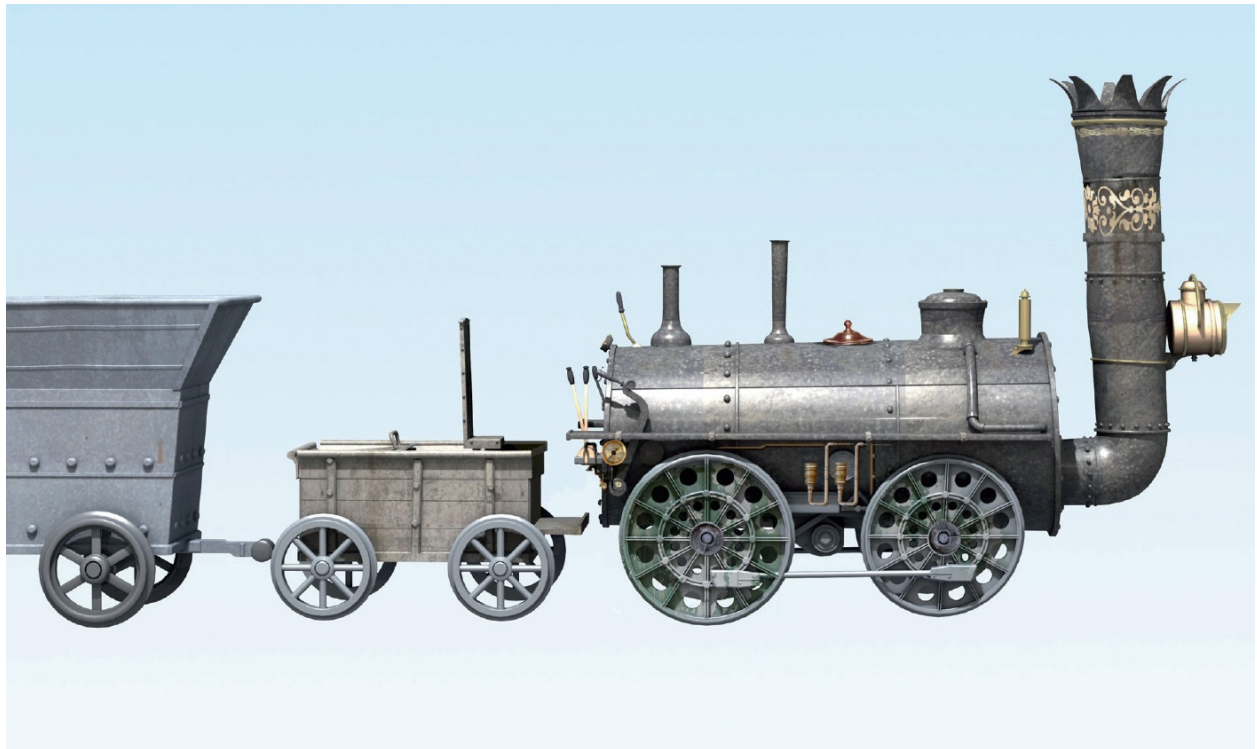
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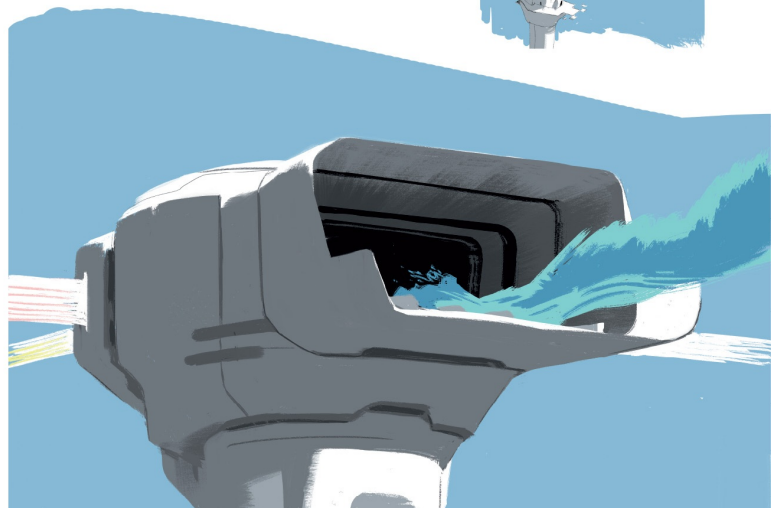
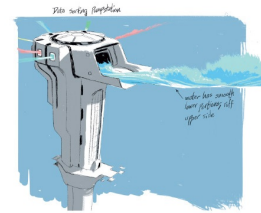
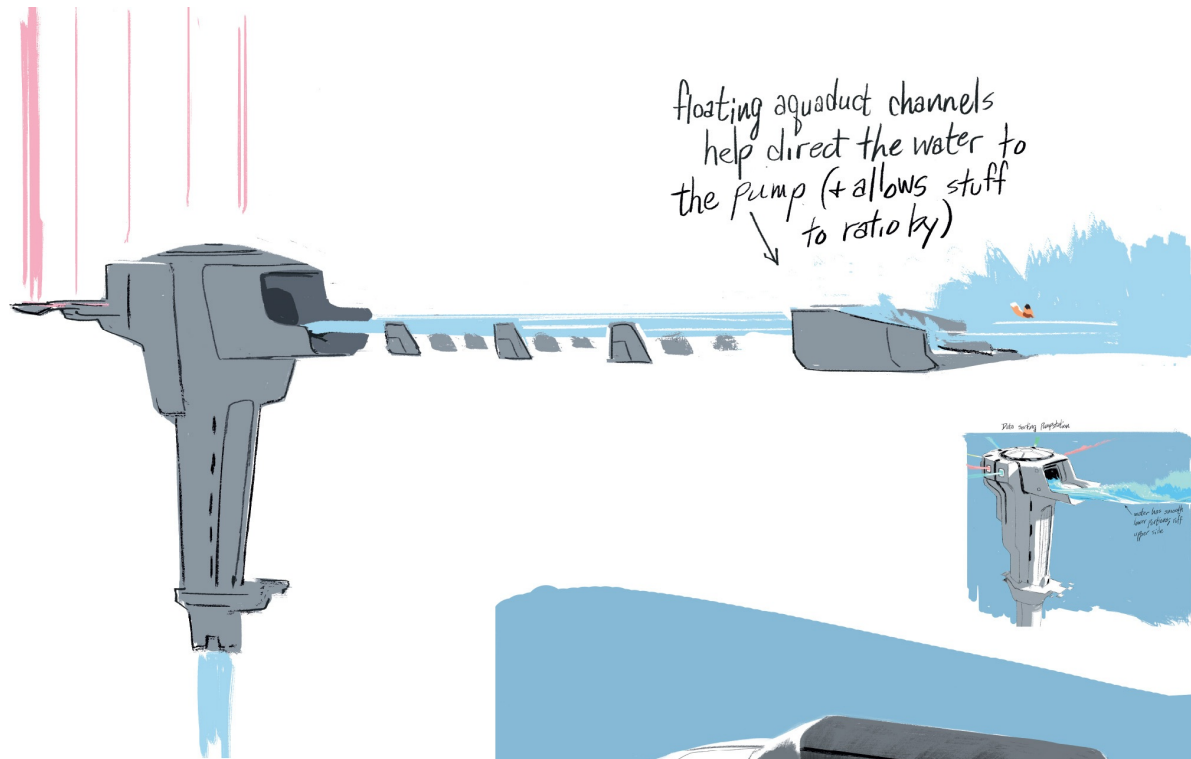
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<Jim Martin / digital>



<Jim Martin / digital>



<Kevin Nelson / digital>



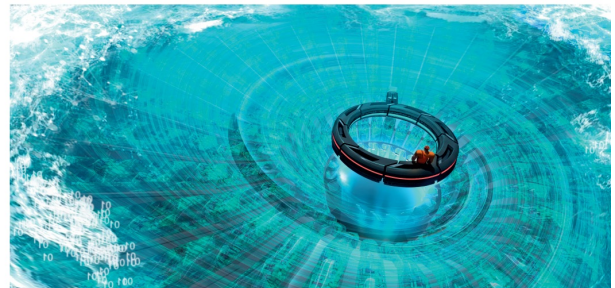
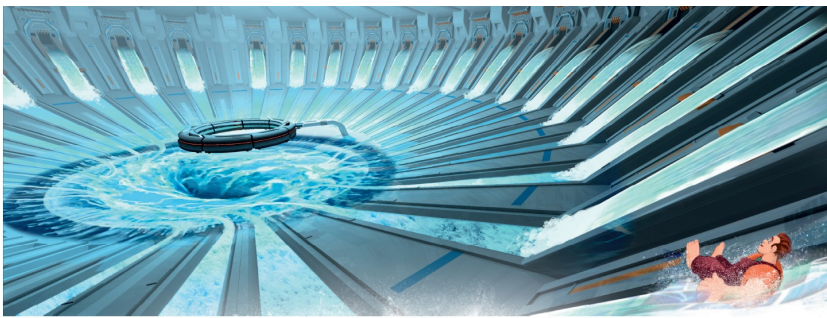
Scott Kersavage  @VisualEffectsSupervisor 

The Data Stream was initially how we thought data would flow through the Internet. We went through a lot of ideas for what it could look like: a wind tunnel, a river, an endless flow of ones and zeroes. At one point, it flowed through an intake hub, where massive amounts of data culminated in a giant whirlpool.

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 27



<Jim Martin / digital>

NEW FRIENDS



<Various Artists / digital>



[–] **Jessica Julius** Author Ralph and Vanellope meet a bunch of new characters in the Internet. Tell us about some of the characters you developed.

[permalink](#) [embed](#)



[–] **Jim Reardon** Director of Story Ralph wants to do the right thing for Vanellope. So he suggests they go to the Internet to find a replacement wheel for her game. But the Internet is overwhelming to Ralph. He's frustrated by the Knowsmore search engine, aggravated at figuring out where to go to find the wheel, excited by the bidding at eBay, but then shocked to realize they have to come up with real money. His ego is boosted by the response to his memes, but he's plunged into despair when he discovers everyone actually hates him and even his best friend wants to leave him. Ralph is on an emotional roller coaster. The characters they meet along the way reinforce all those feelings.

[permalink](#) [embed](#) [parent](#)



[–] **Josie Trinidad** Head of Story Meanwhile Vanellope loves everything about the Internet. Her world is expanding: She's thrilled by the new challenges of Slaughter Race, she finds camaraderie from the princesses who encourage her to know what she wants, and she enjoys Shank's mentorship. Ralph and Vanellope are like two kids from a small town who think life is just great until they go to the big city and see there might be

more to life. And Ralph responds by wanting to go back home to how things were, while Vanellope is thrilled by all the new experiences.

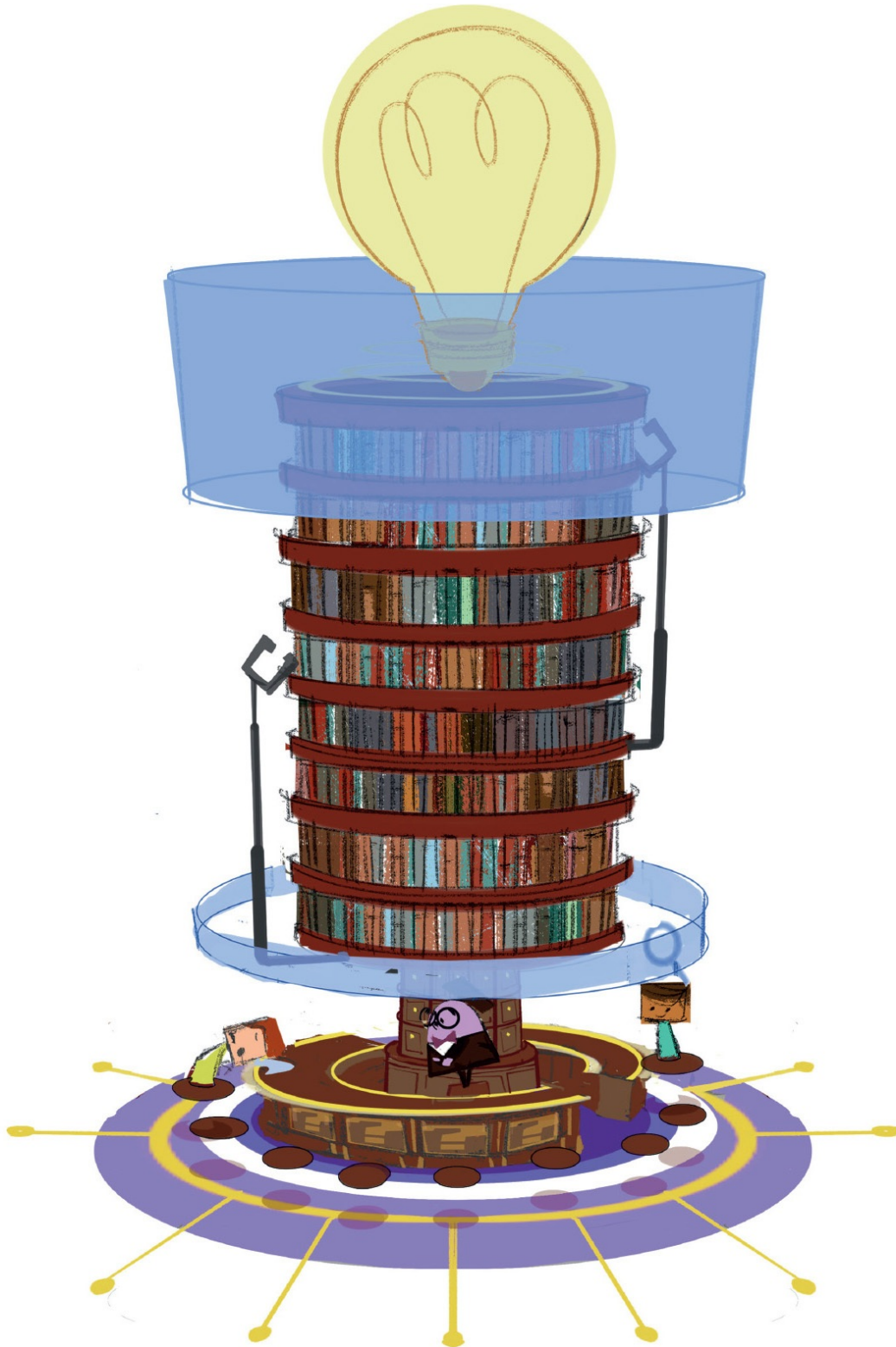
[permalink](#) [embed](#) [parent](#)



<Ami Thompson / digital>



<Mingjue Helen Chen / digital>



<Justin Cram / digital>



<Ami Thompson / digital>



<Ami Thompson / digital>

KNOWSMORE



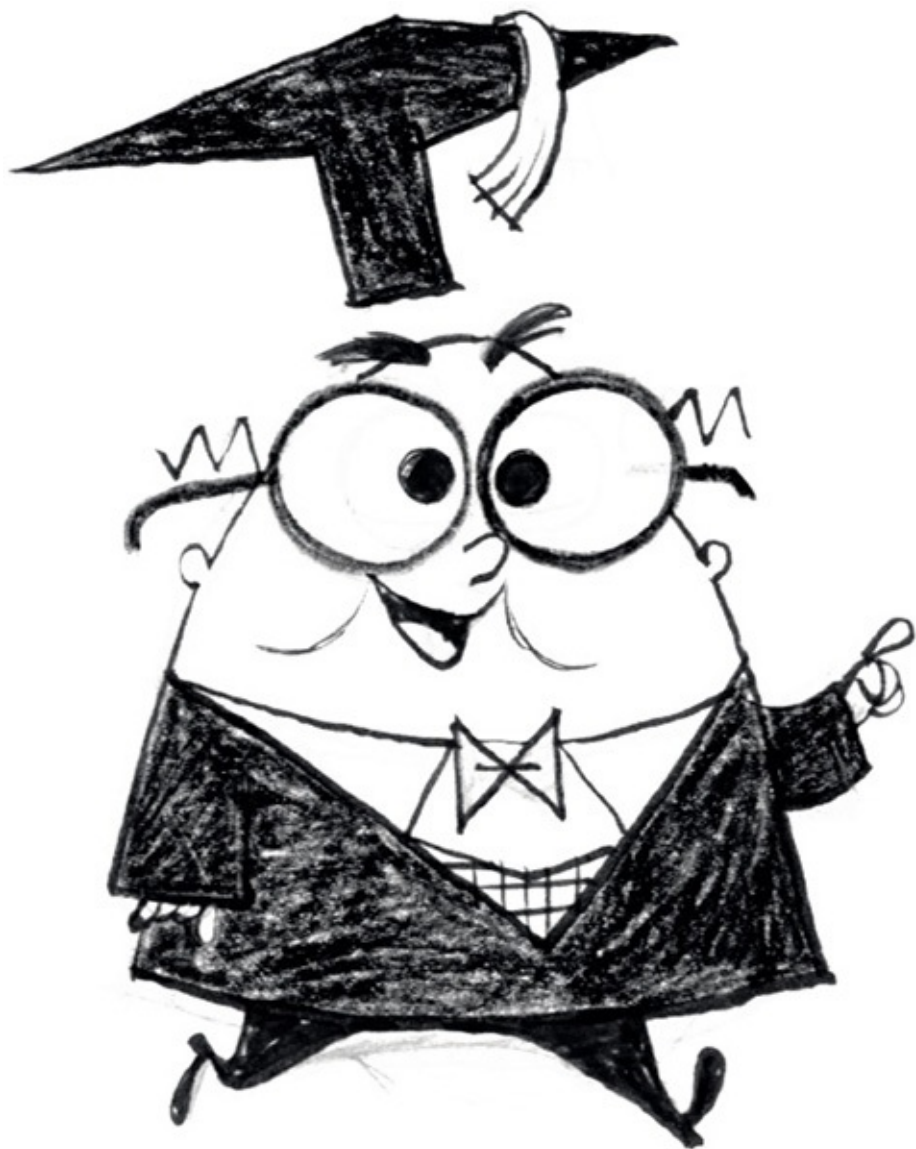
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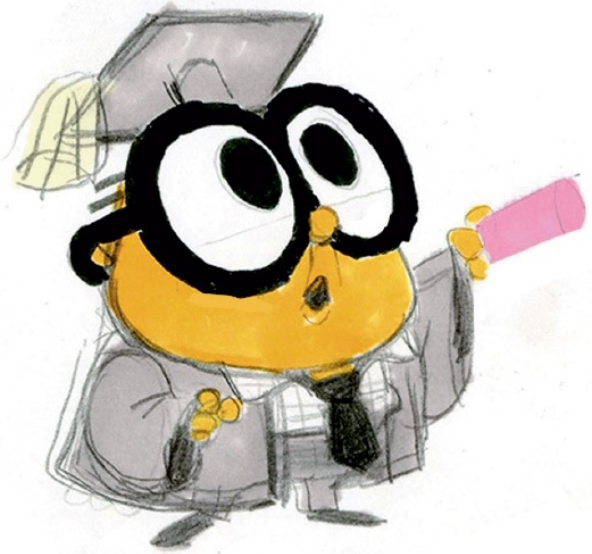
Ami Thompson, Art Director, Characters
Knowsmore went through many iterations. We drew him as an owl, a lightbulb, a professor. His final form combined those ideas and was inspired by Maurice Noble, M. Sasek, and the flat, graphic UPA style of the 1950s and '60s.



<Ami Thompson / digital>



<Cory Loftis / digital>



<Nicholas Orsi / digital>



<Cory Loftis / digital>



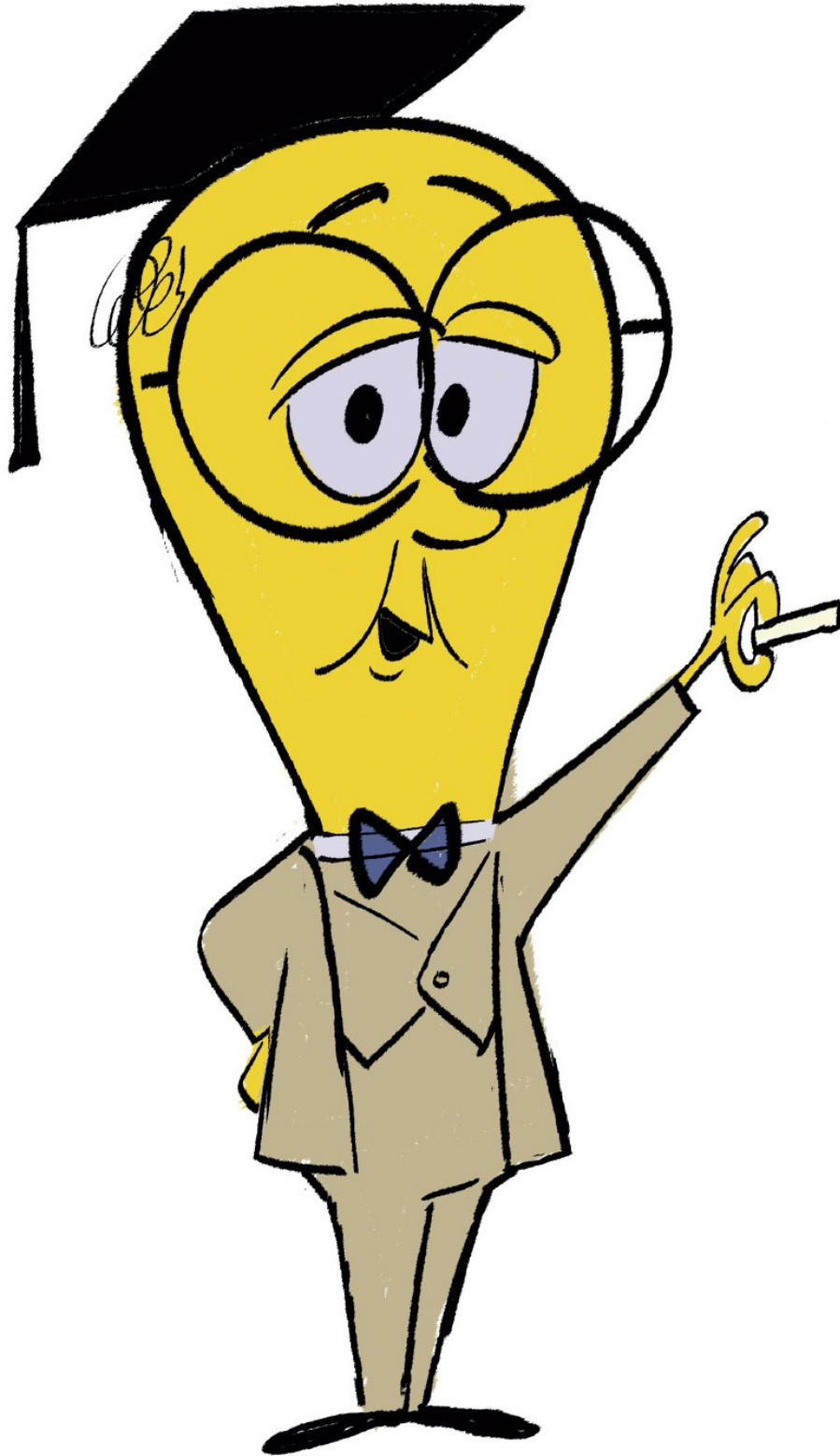
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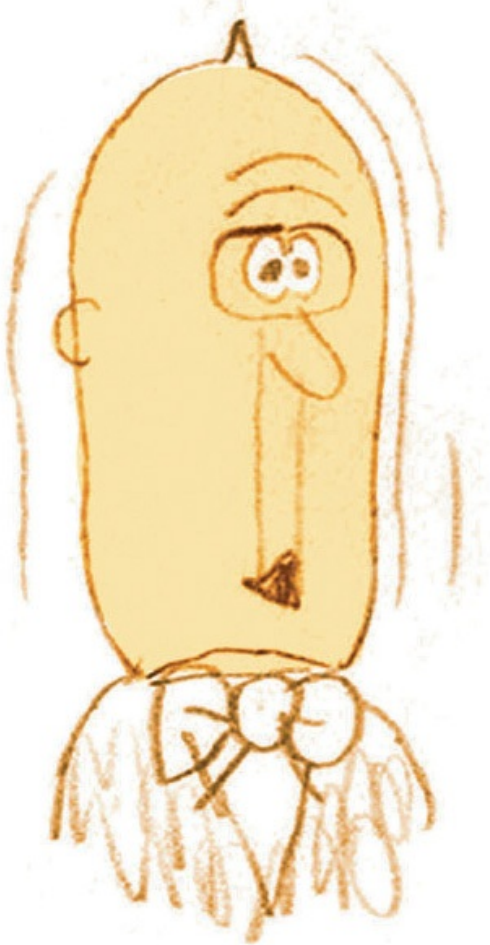
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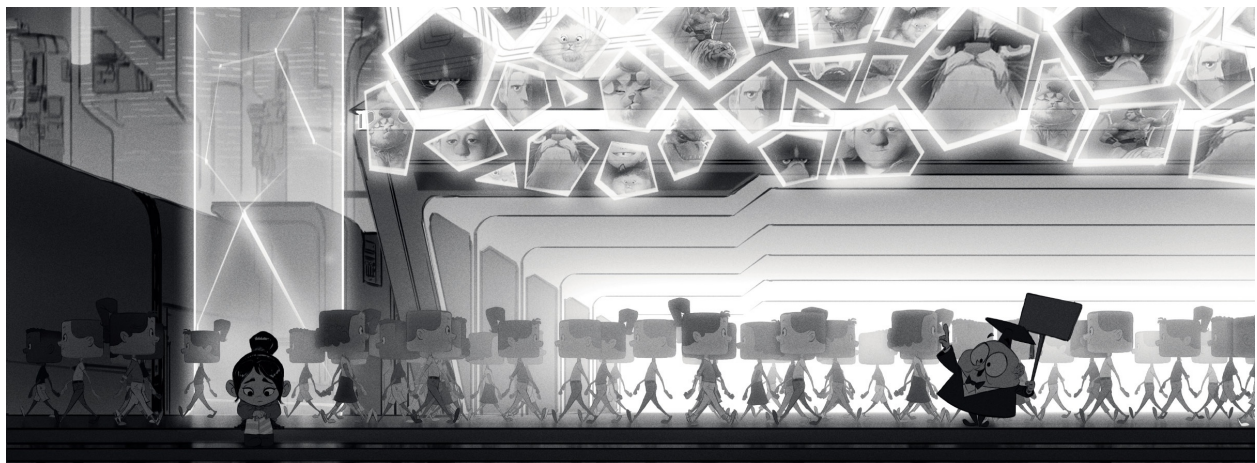
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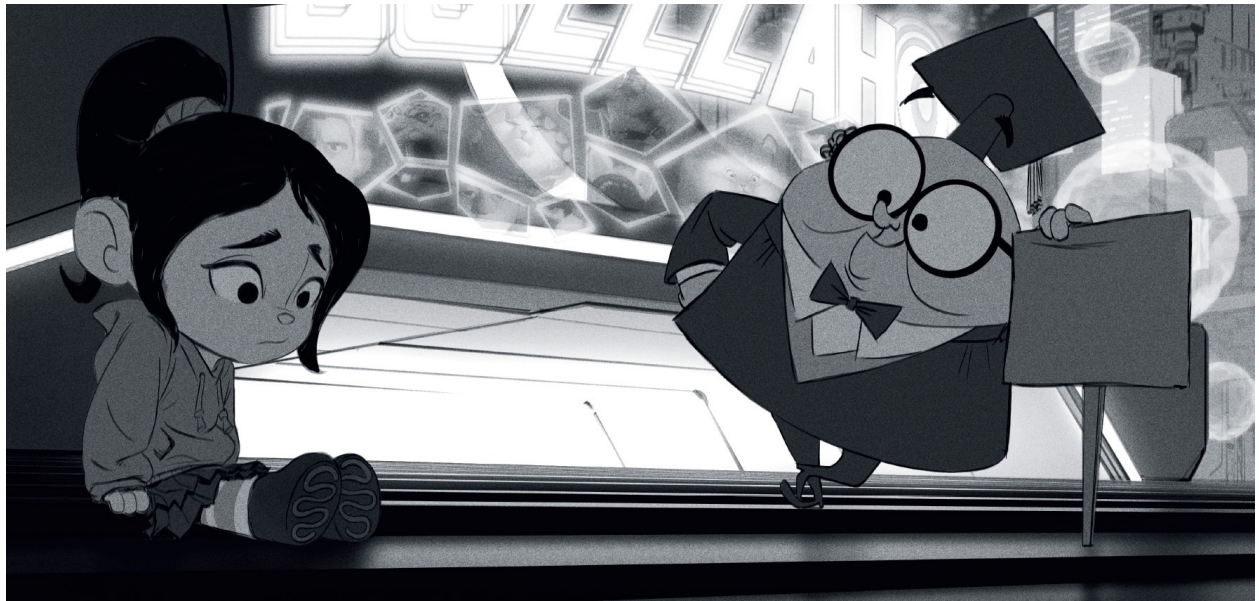
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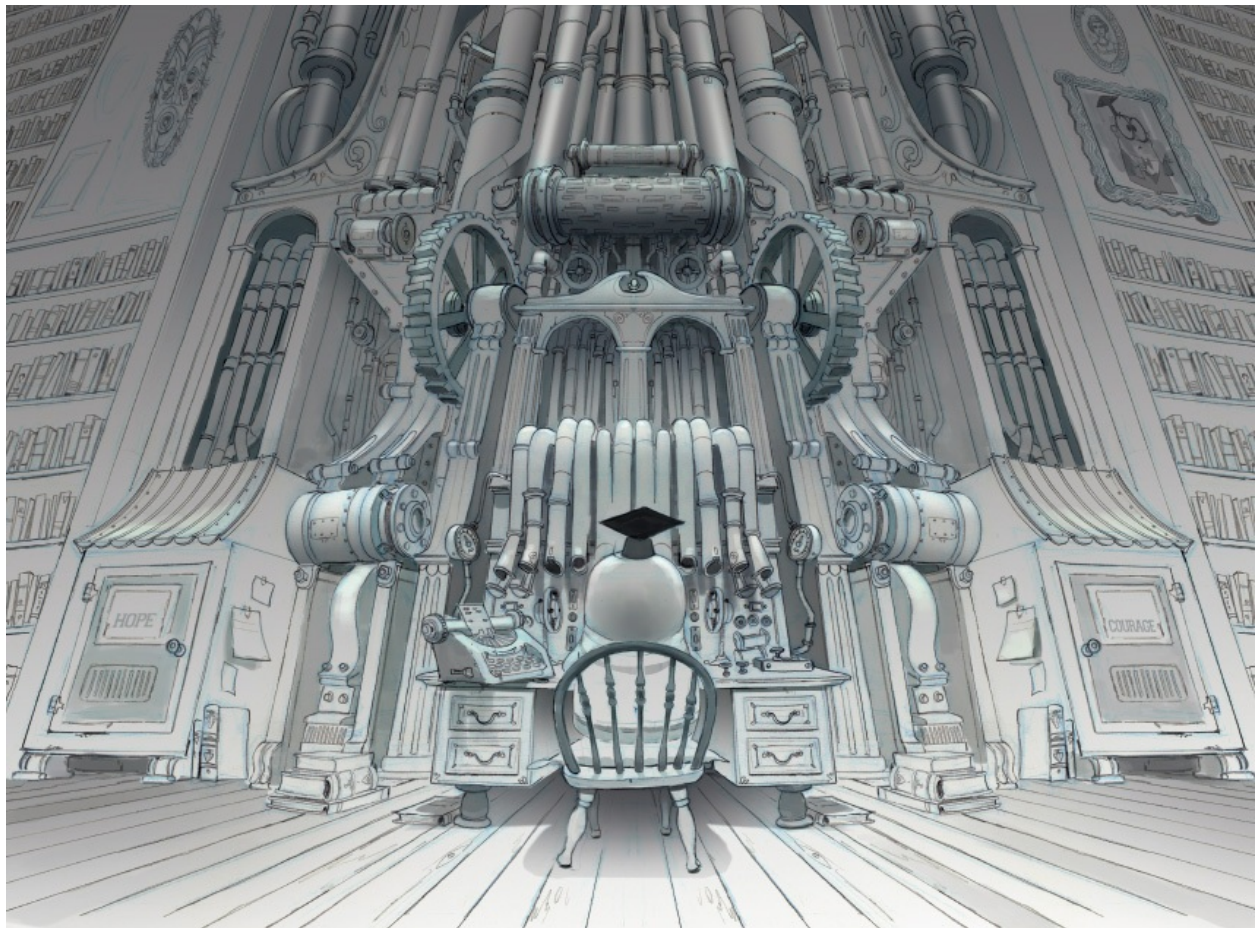
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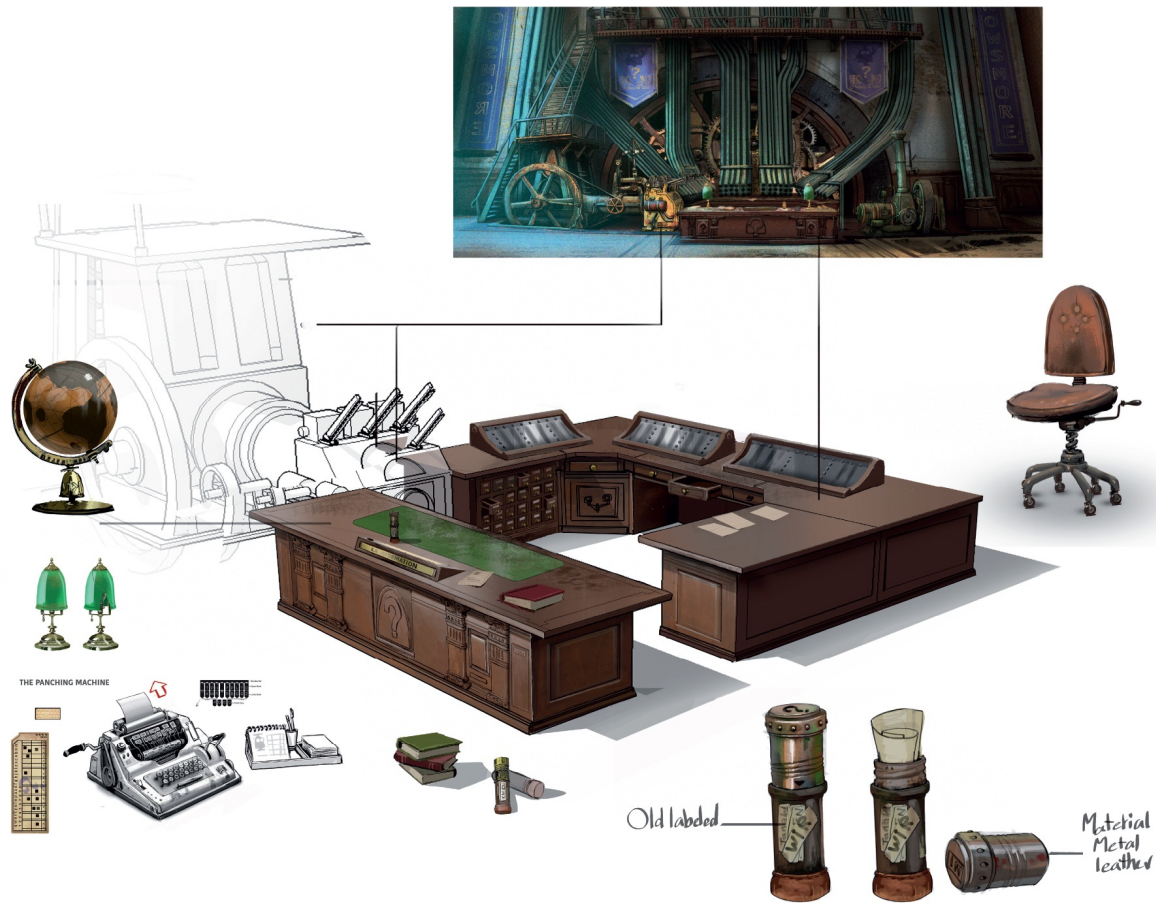
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<Jim Martin / digital>



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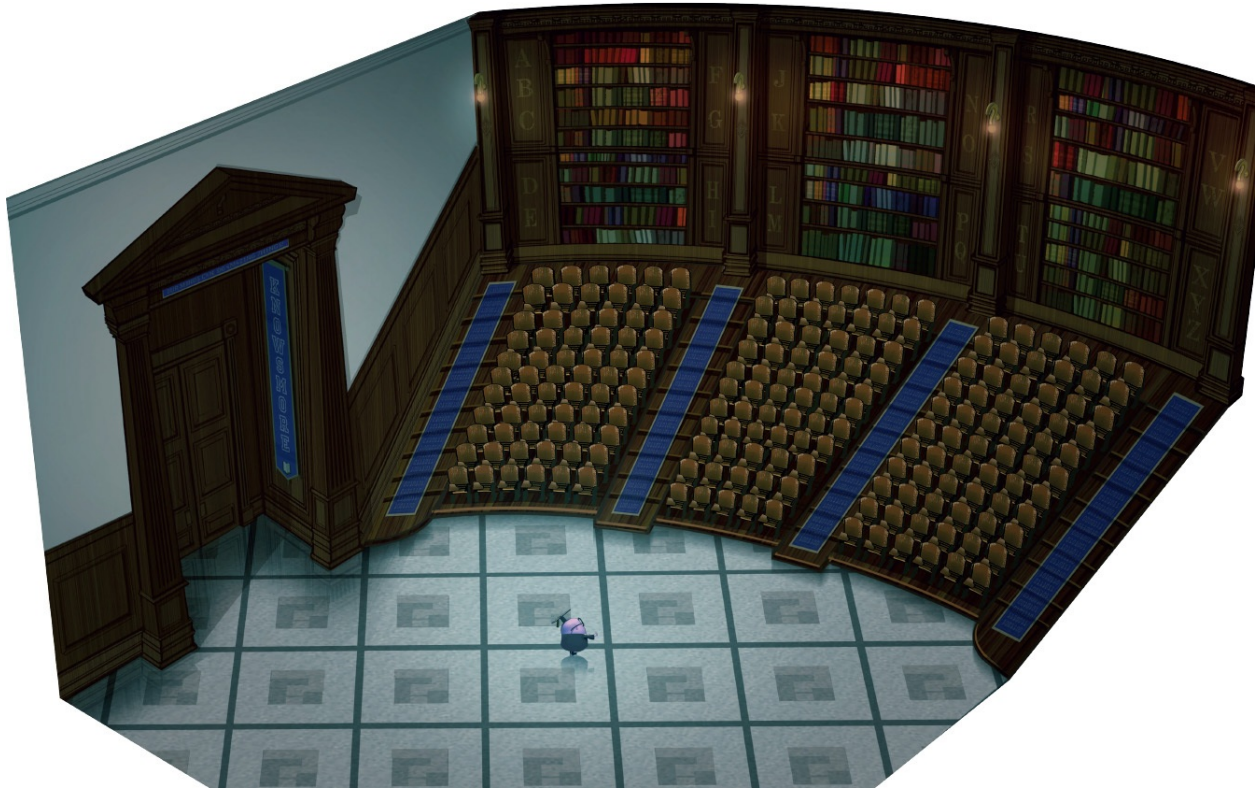


Matthias Lechner, Art Director, Environments

[Knowsmore.com](https://www.knowsmore.com) was initially conceived as an abandoned search engine whose website used to be the biggest on the Internet. It was like a grand college library, with doorways, windows, roof, and interior details that all have a rounded gumdrop shape. Cool, desaturated colors like purple and gold helped emphasize the sad abandoned feeling. In the end it became a booth in the HUB.



<Mehrdad Isvandi / digital>



<Justin Cram / digital>

SLAUGHTER RACE



Cory Loftis

Production Designer · 🌐



Slaughter Race is a post-apocalyptic mash-up of inspiration from *Mad Max*, *Grand Theft Auto*, and the *Fast & Furious* movies. It's extreme. It has the most random, wild, dangerous things.



Phil Johnston and 34 others

15 Comments



Like



Comment



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<Scott Watanabe / digital>



<Ryan Lang / digital>



<Ryan Lang / digital>



Cory Loftis

Production Designer · 🌐



Everything in Slaughter Race is built around an S shape, to evoke a swerving car, a bullwhip, flames. The color scheme is tinted a heavy, toxic yellow that turns to pure fiery orange as the intensity builds over the scene.



Matthias Lechner and 12 others

8 Comments



Like



Comment



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<Graffiti: Kevin Nelson / digital>



<Mike Yamada / digital>



<Mingjue Helen Chen / digital>



<Mingjue Helen Chen / digital>



<Graffiti: Kevin Nelson / digital>



Cesar Velazquez

Head of Visual Effects · 🌐

The effects in Slaughter Race are heavily stylized, graphic and flat with a hand-drawn feeling, almost like a graphic novel. The challenge was to make them look that way even when they were moving.



Jim Reardon and 17 others

9 Comments



Like



Comment



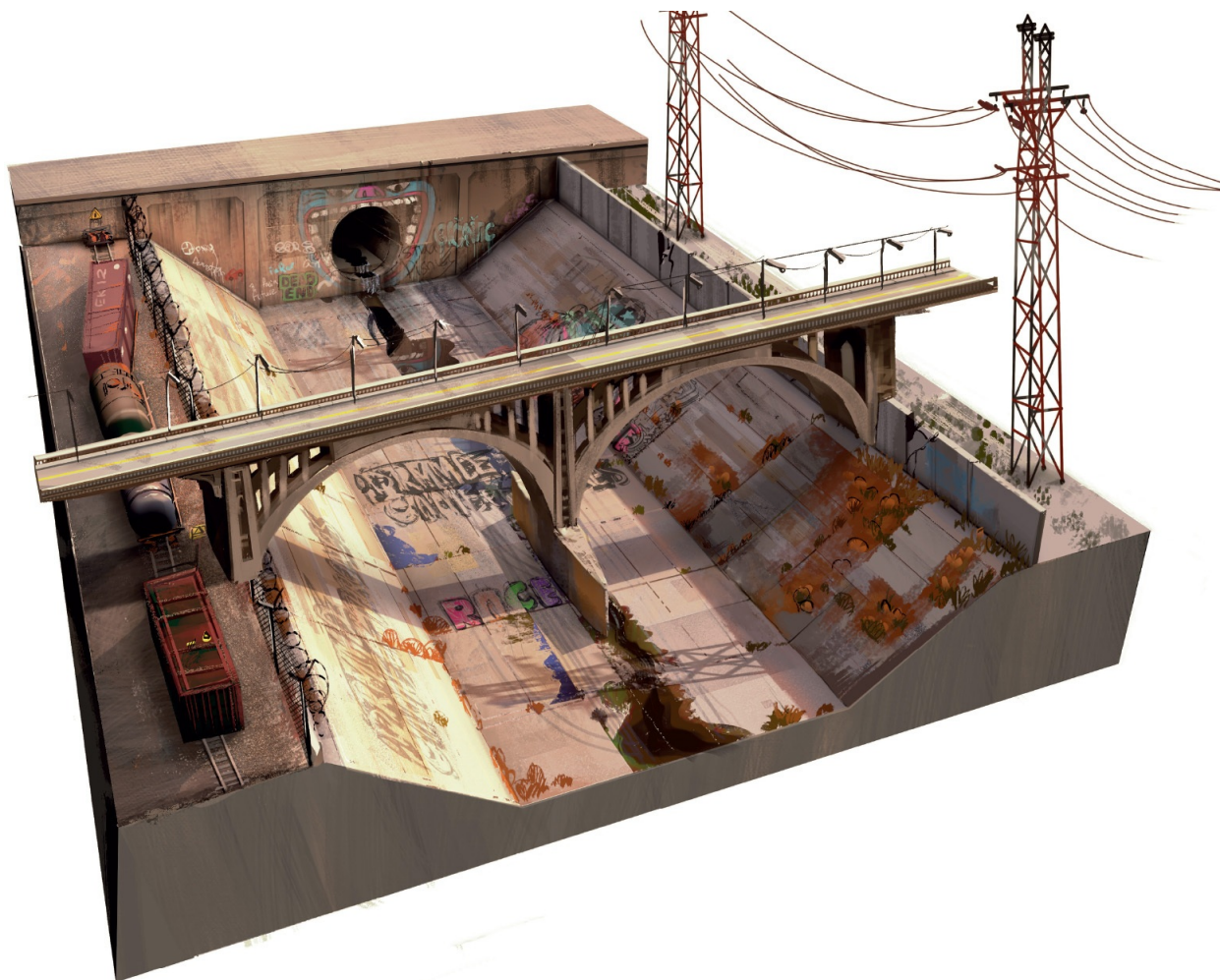
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<Paul Felix / digital>



<Mingjue Helen Chen / digital>



<Mehrdad Isvandi / digital>



<Jim Martin / digital>



<Jim Martin / digital>



<Jim Martin / digital>



<Mike Yamada / digital>



Cory Loftis

Production Designer · 🌐



Each time Ralph and Vanellope visit Slaughter Race it has to look different to enhance what is happening in the story. It's smoggy, dirty, rundown, and scary the first time they experience it. But later Vanellope starts to think that maybe she belongs there so we had to make it a more visually pleasant place, with brighter colors and shifts in the lighting.



Mingjue Helen Chen and 19 others

6 Comments



Like



Comment



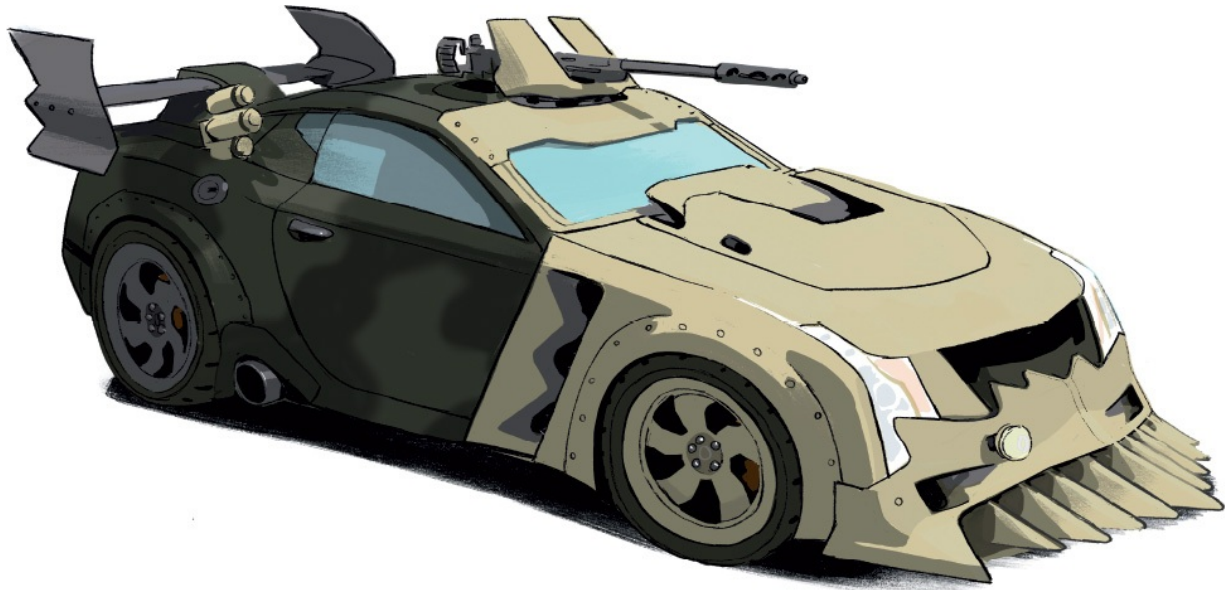
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<Jim Martin / digital>



<Jim Martin / digital>



<Kevin Nelson / digital>



<Jim Martin / digital>



Kevin Nelson

Visual Development Artist · 🌐



The vehicles in Slaughter Race are nuts. There's a motorcycle with tank tread for wheels, but on the treads are little chain saws. There's a ship that was turned into a truck that can release giant metal balls out of the back to smash things. There are old rat-rod cars chopped up and rebuilt.



Kevin Nelson and 34 others

17 Comments



Like



Comment



Share



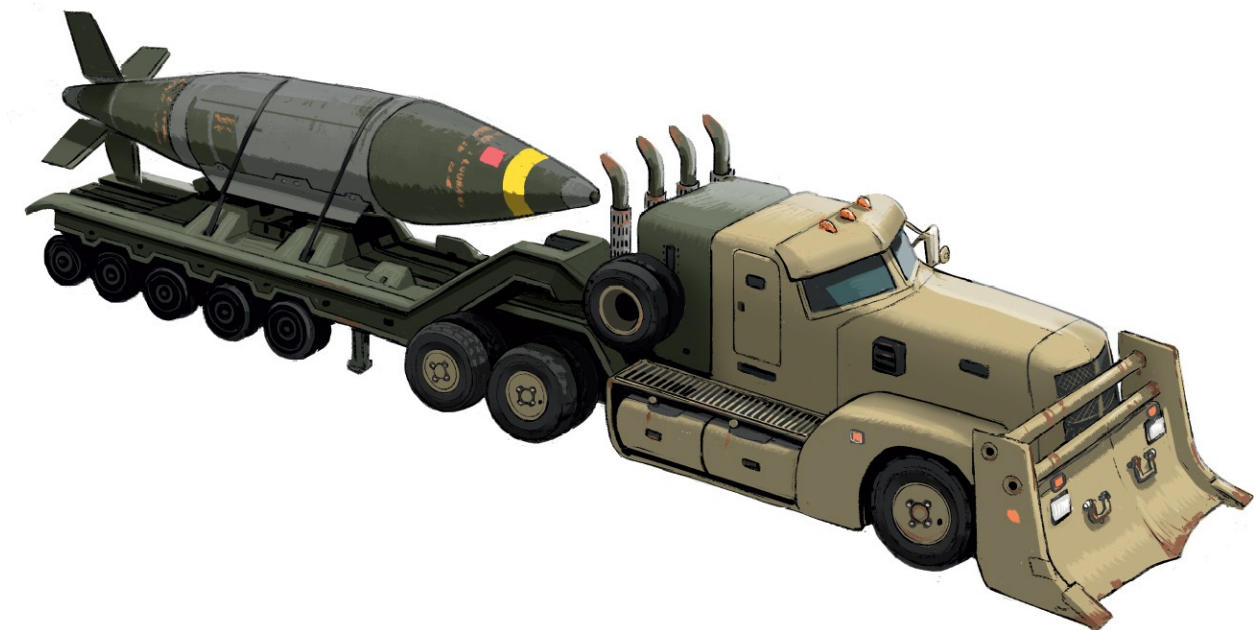
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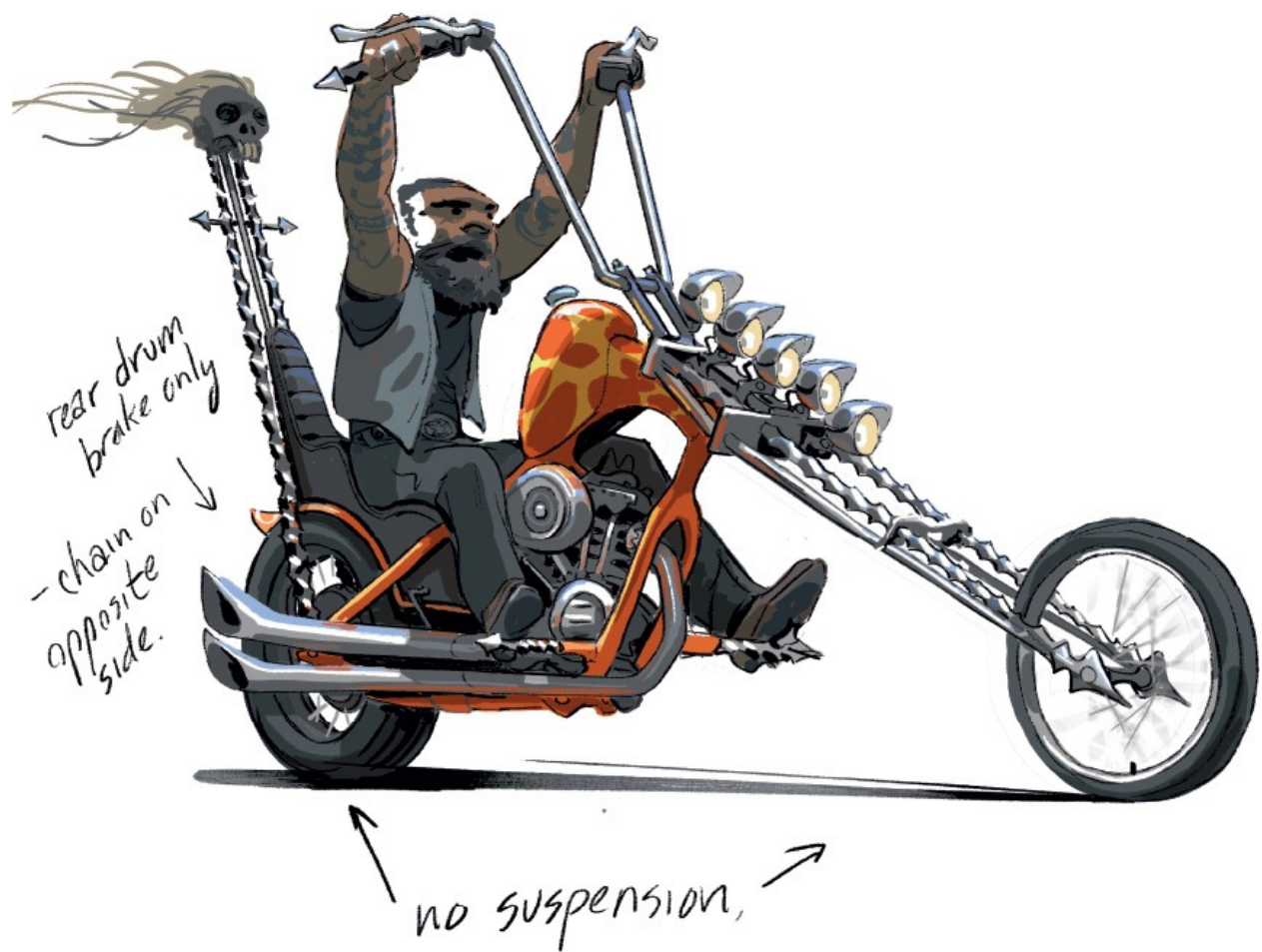
<Kevin Nelson / digital>



<Jim Martin / digital>



<Kevin Nelson / digital>



<Kevin Nelson / digital>



<Cory Loftis / digital>



<Kevin Nelson / digital>



Renato dos Anjos

Head of Animation · 🌐



In Slaughter Race, the vehicle animation is exaggerated and fantastical but still feels heavy, powerful, and believable. A lot of research went into making sure whatever techniques and stunts Shank and Vanellope perform with their vehicles are technically accurate.



Cory Loftis and 23 others

9 Comments



Like



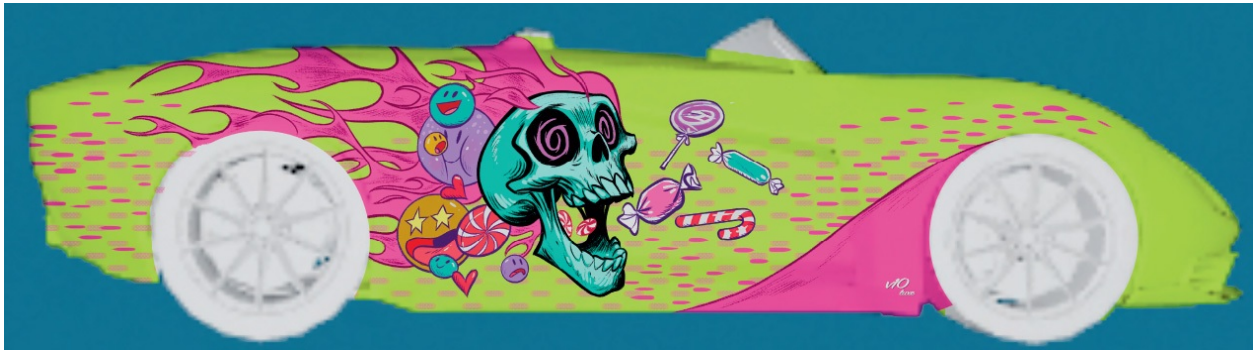
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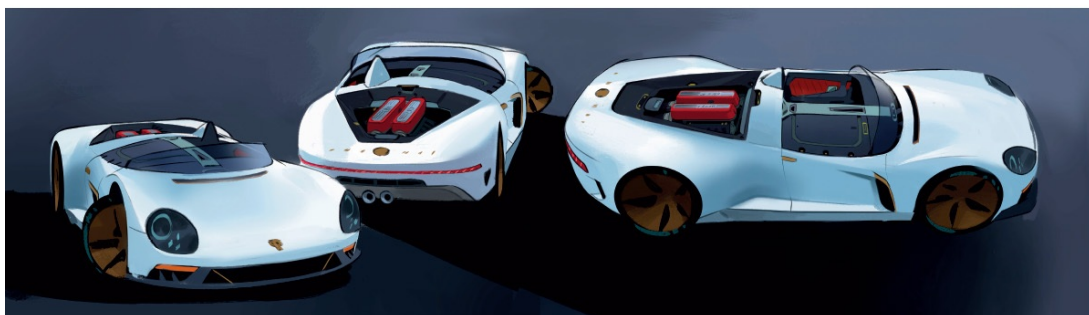
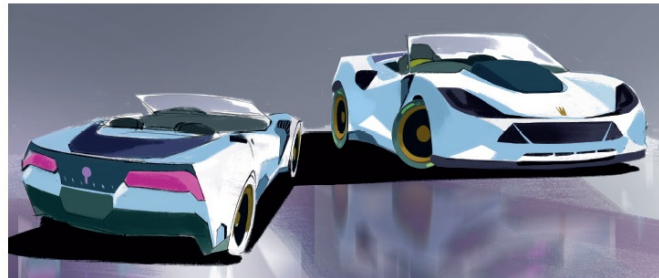
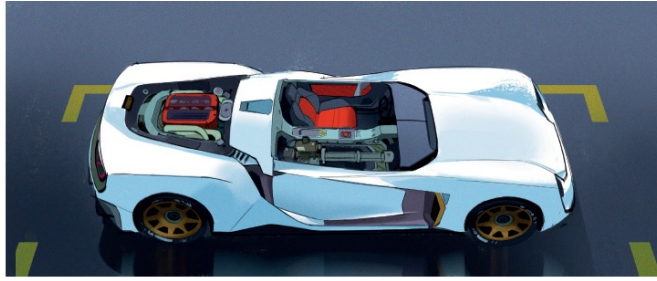
<Kevin Nelson / digital>



<Cory Loftis / digital>



<Mike Yamada / digital>



<Mike Yamada / digital>

SHANK



Jim Reardon, Director of Story

Shank is a tough, take-no-prisoners woman, and she's probably the most evolved character in the film! She tells Vanellope to work things out with Ralph.



<Ami Thompson / digital>



<Ami Thompson / digital>



<Ami Thompson / digital>



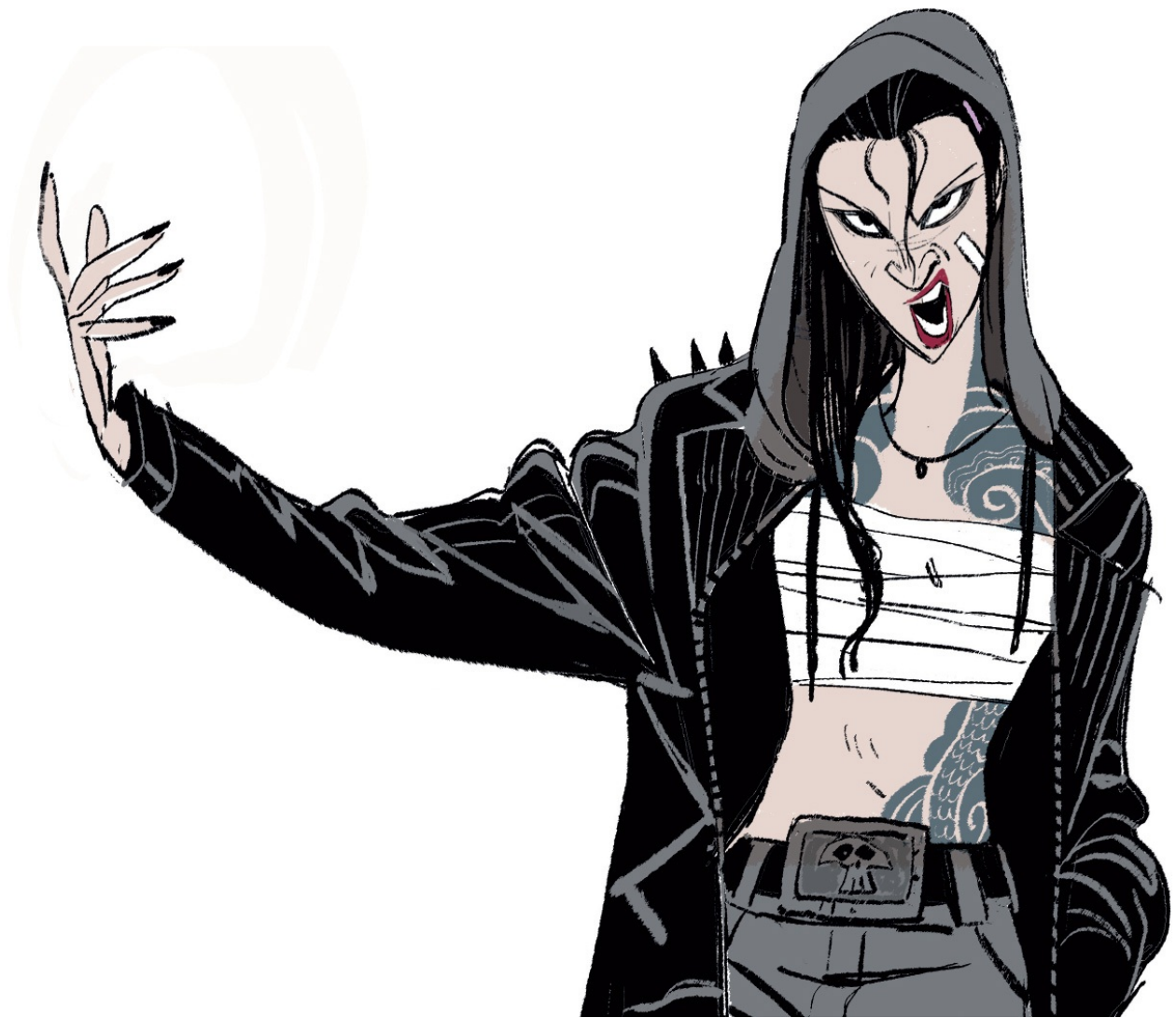
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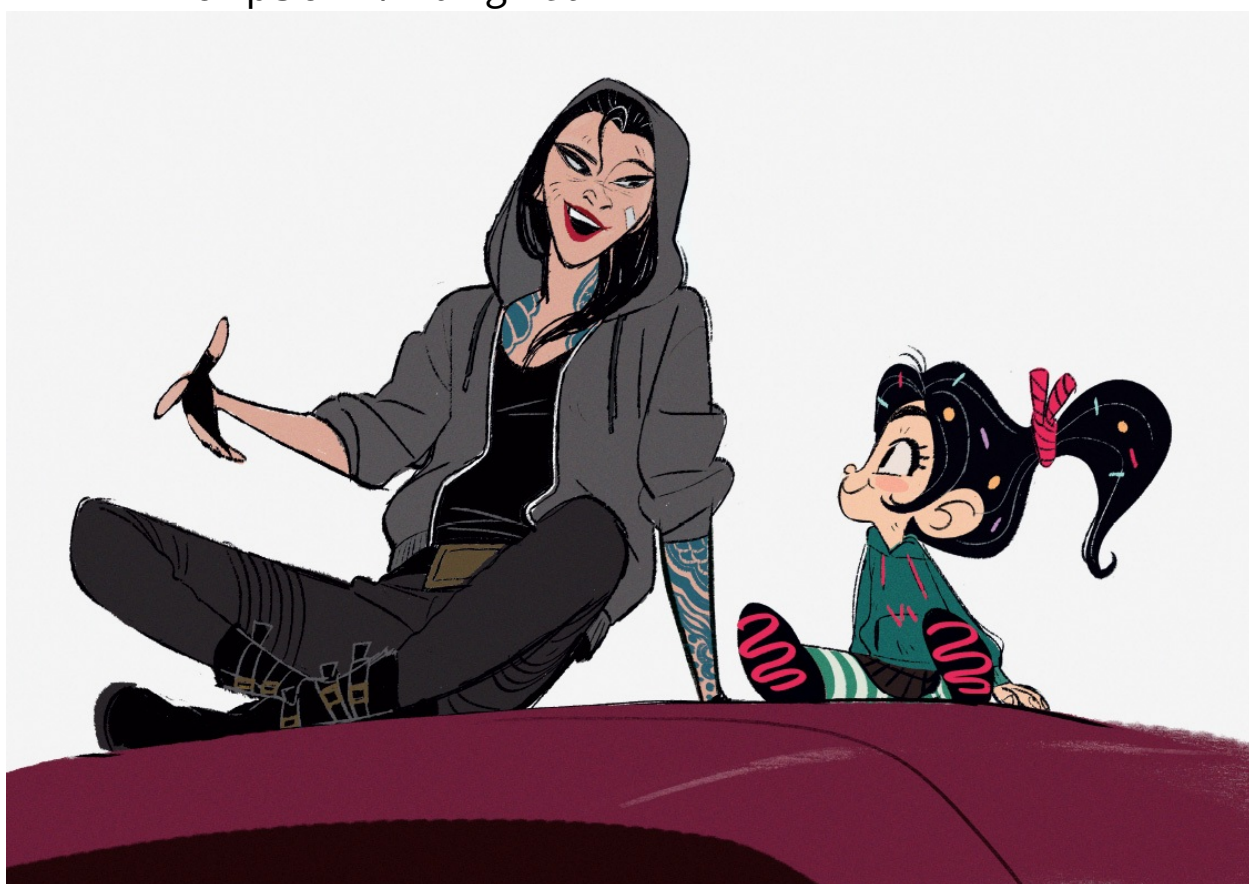
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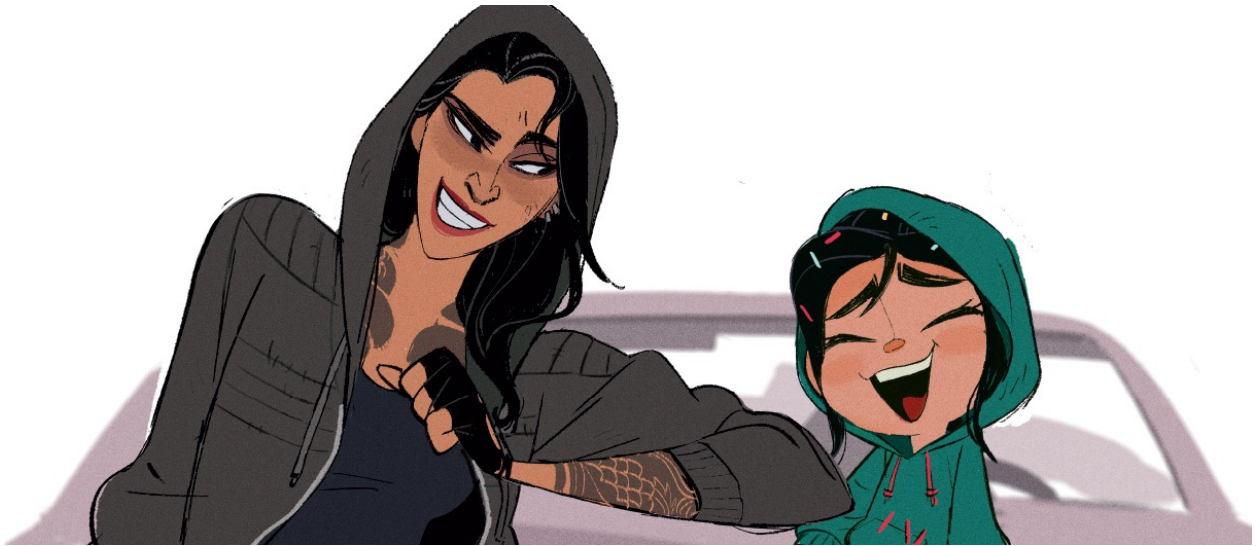
Ami Thompson, Art Director, Characters
Shank looks intimidating but Vanellope respects her skills.
Shank is all about driving so we designed her to look cool doing that: wind blowing through her hair, her tattoo-covered arm on the wheel.



<Ami Thompson / digital>



<Ami Thompson / digital>



<Ami Thompson / digital>



<Jeff Merghart / digital>



<Ami Thompson / digital>



<Ami Thompson / digital>



<Jeff Merghart / digital>



<Jeff Merghart / digital>



Ami Thompson, Art Director, Characters

Shank and the other Slaughter Race netizens have a design style that is more realistic and less cartoony than the rest of the Internet. They're roughed up and trashy, designed to look intimidating, even though they're friendly.



<Jeff Merghart / digital>



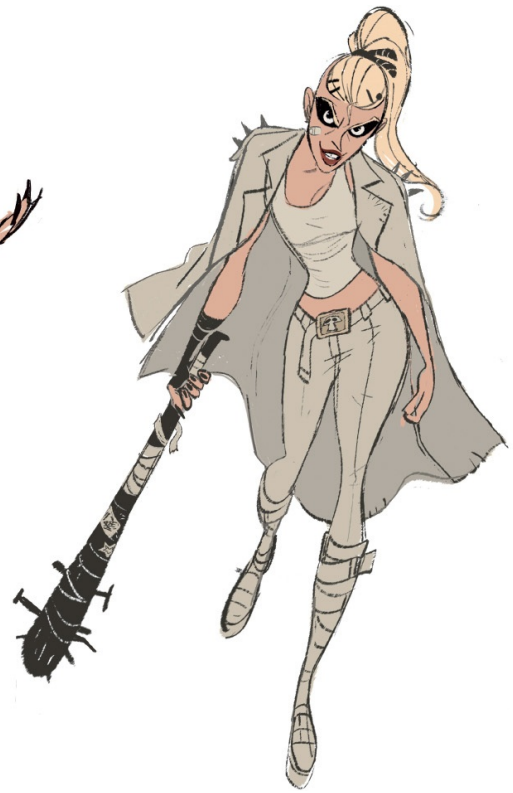
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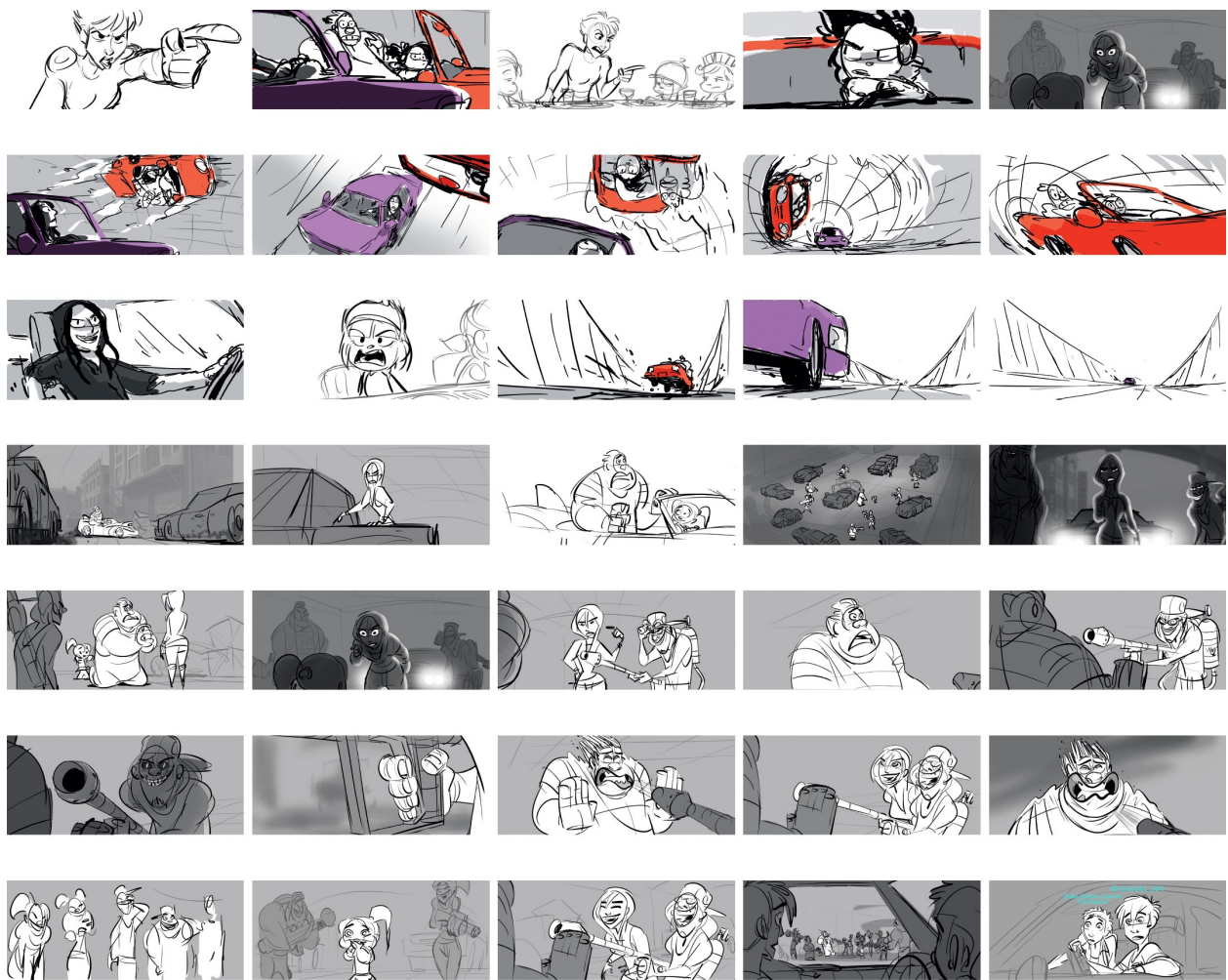
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<Lissa Treiman, Toby Shelton / digital>



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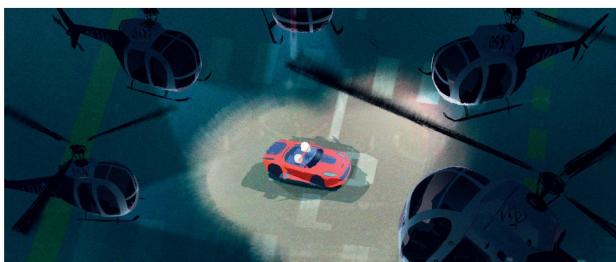
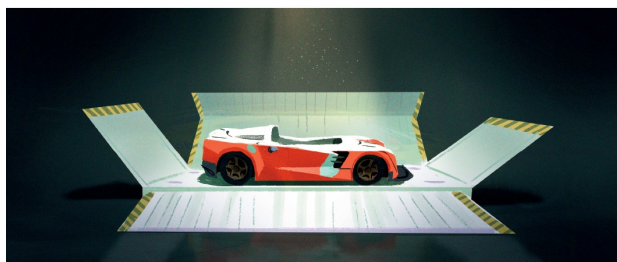
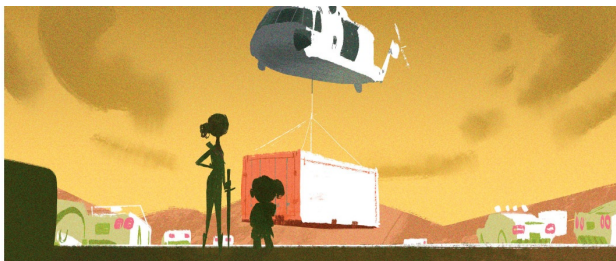
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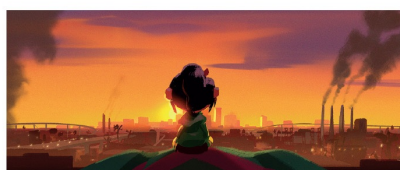
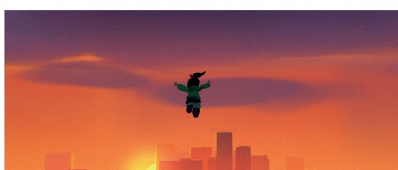
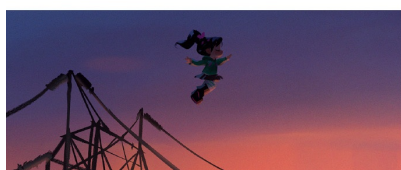
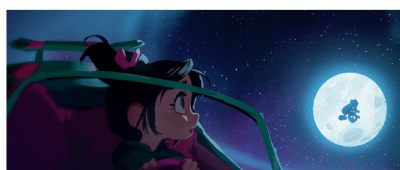
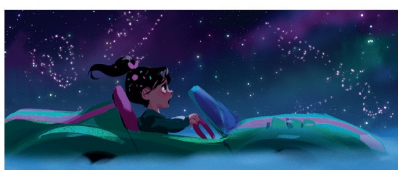
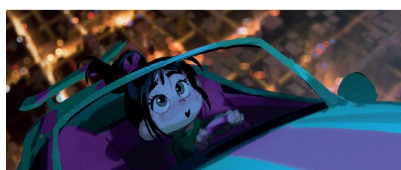
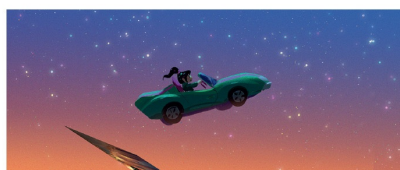
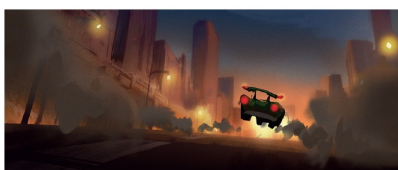
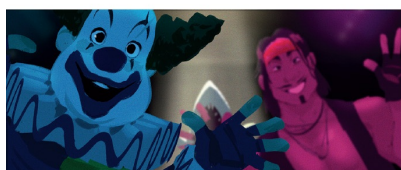
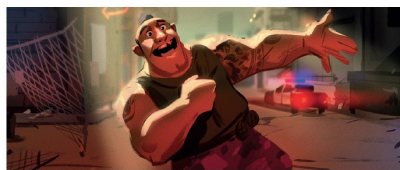
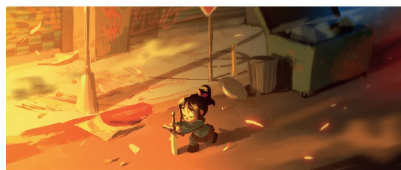
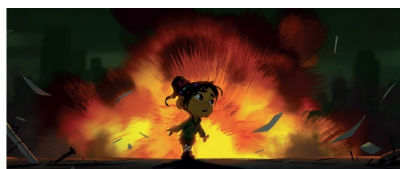
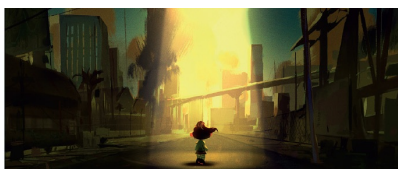
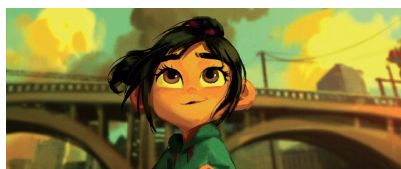
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<Jeff Merghart / digital>



<Mike Yamada / digital>



<Mingjue Helen Chen / digital>

BUZZZTUBE



Cory Loftis  @ProductionDesigner

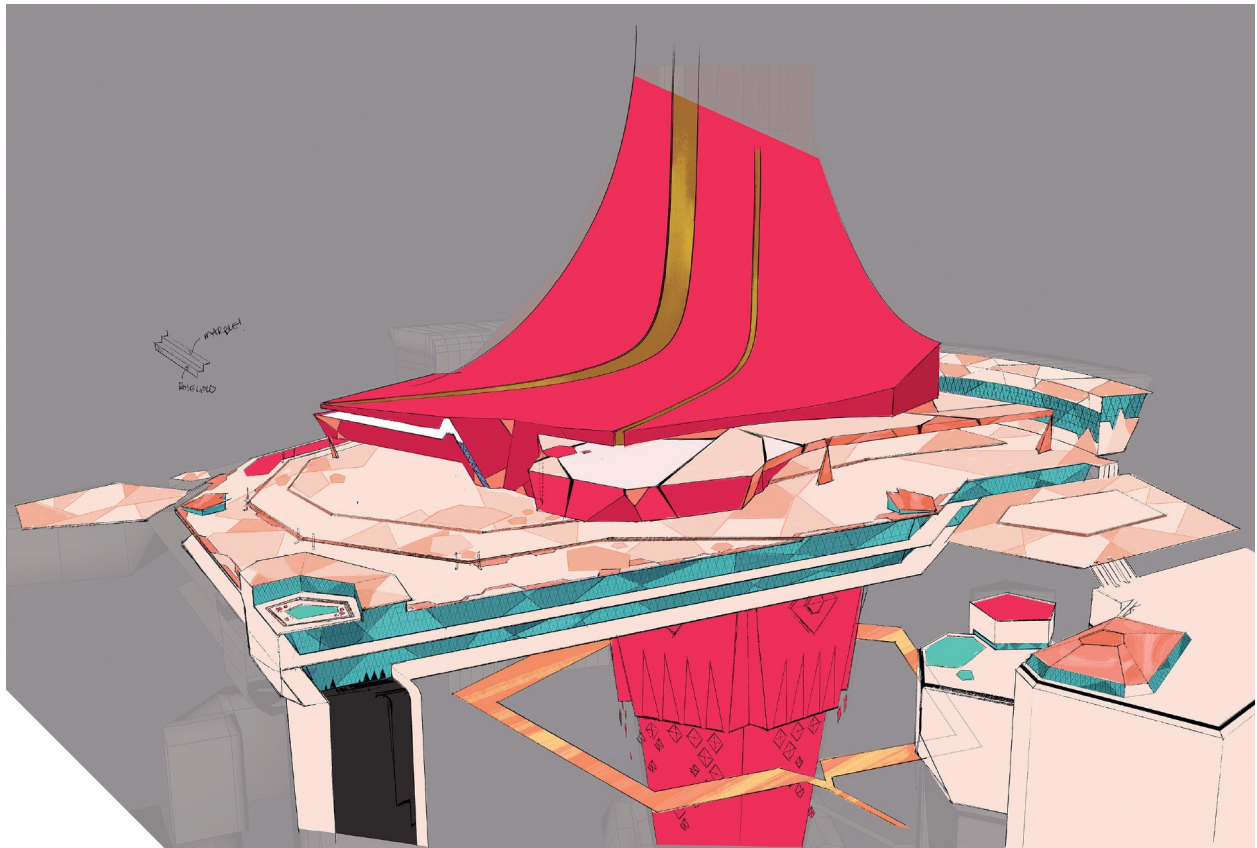


BuzzTube is the most modern, hip website on the Internet, the ultimate social experiment, a fashion show and nightclub in one. Its aesthetic is all flash and theatrics. The site is connected to the relentless, enormous feed of Internet content and countless screens dominate the space from floor to ceiling, displaying the hottest Internet memes and videos. Users rate the content, voting it up or down, and when something is up-voted it rises to a higher floor of the site. The most popular content is given a place of honor, a VIP room reserved for pieces of media receiving one billion hearts.

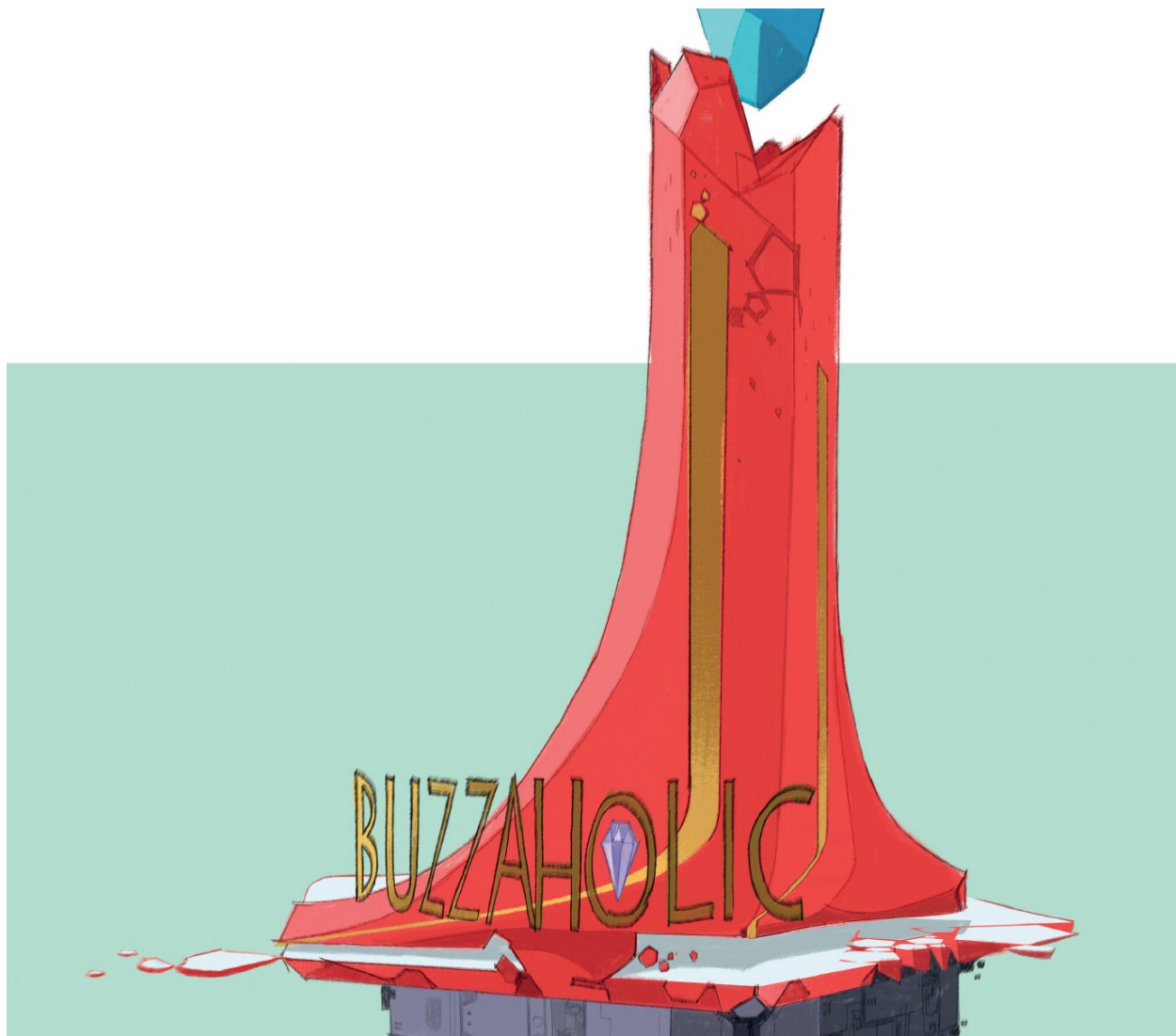
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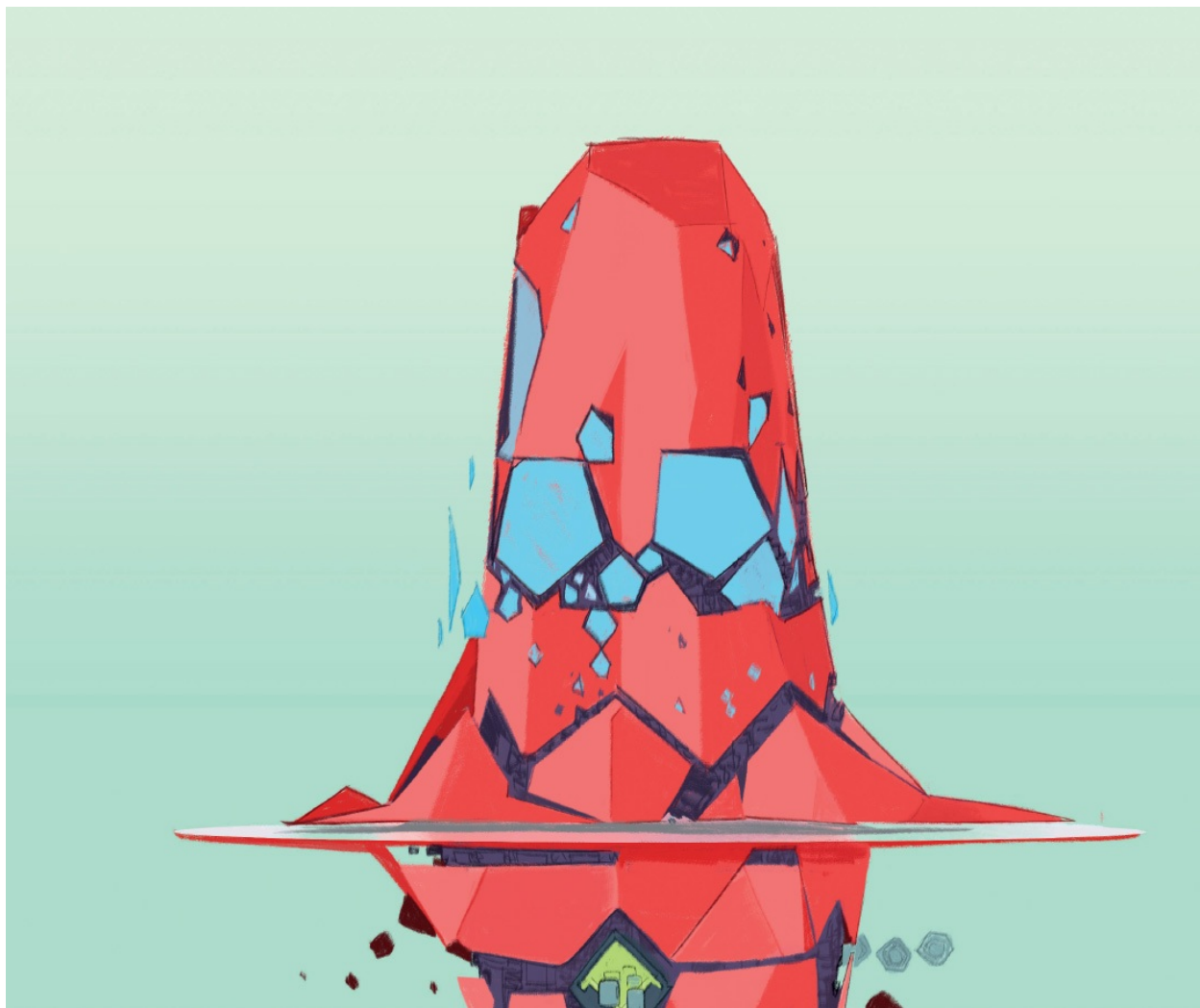
<Mingjue Helen Chen / paintover>



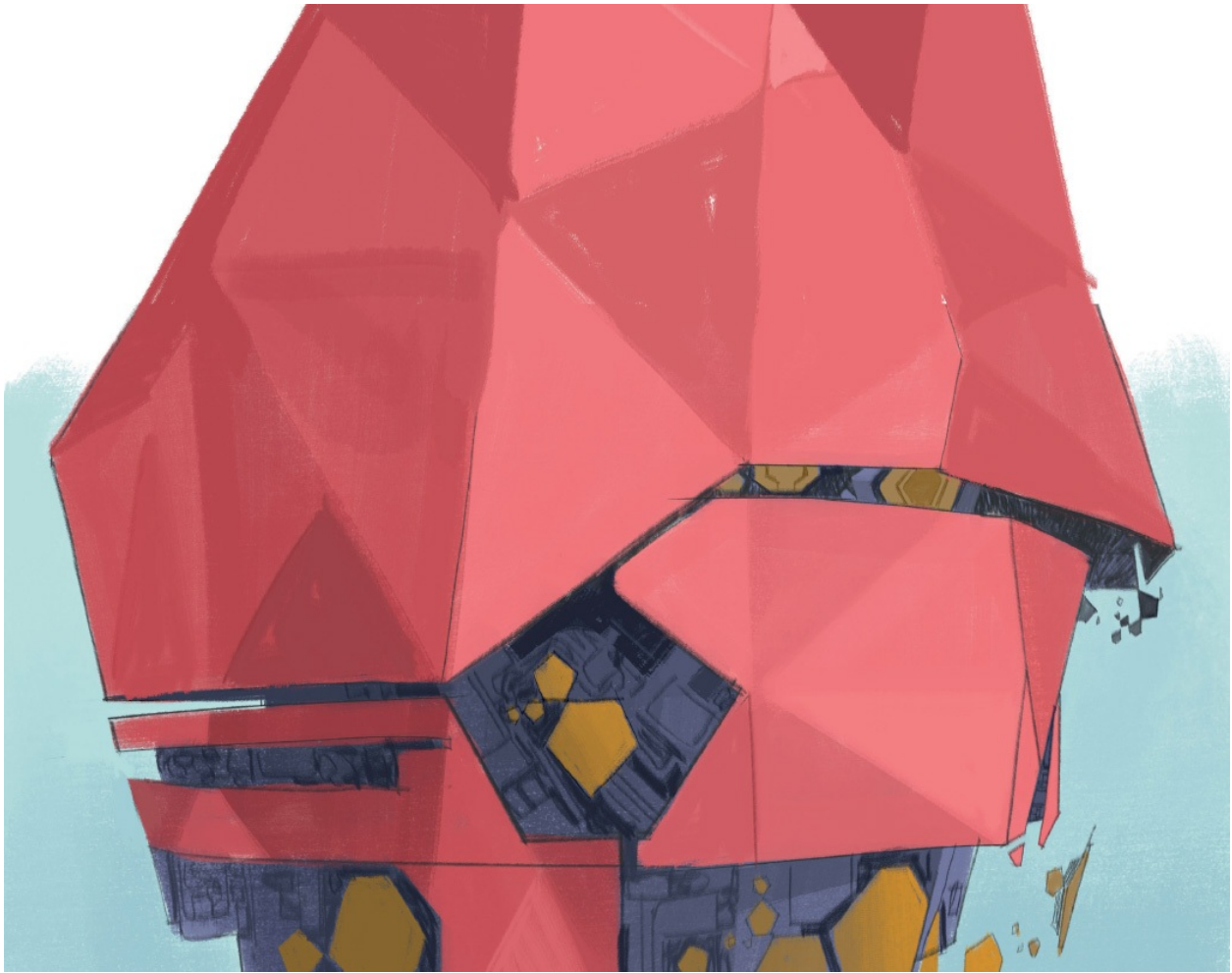
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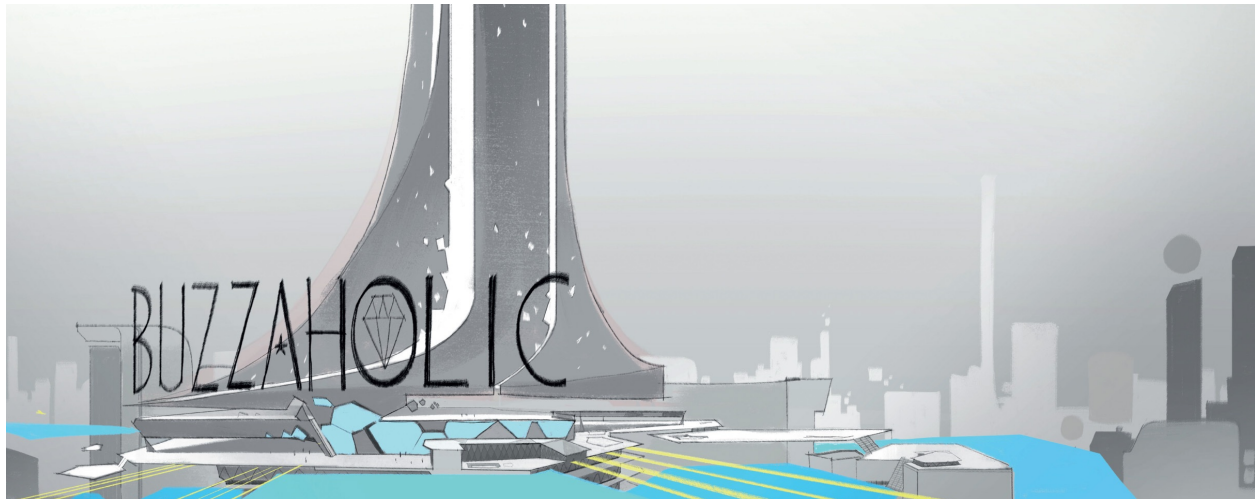
Mike Yamada  @VisualDevelopmentArtist

BuzzTube is comprised of long curves mixed with pentagons and hexagons. The exterior is a deconstructed cube language with disconnected yet flowing surfaces. While designing it, I folded and crumpled paper, photographed it, drew over the photos, all while trying to create a structure that physically could not be built in the real world.

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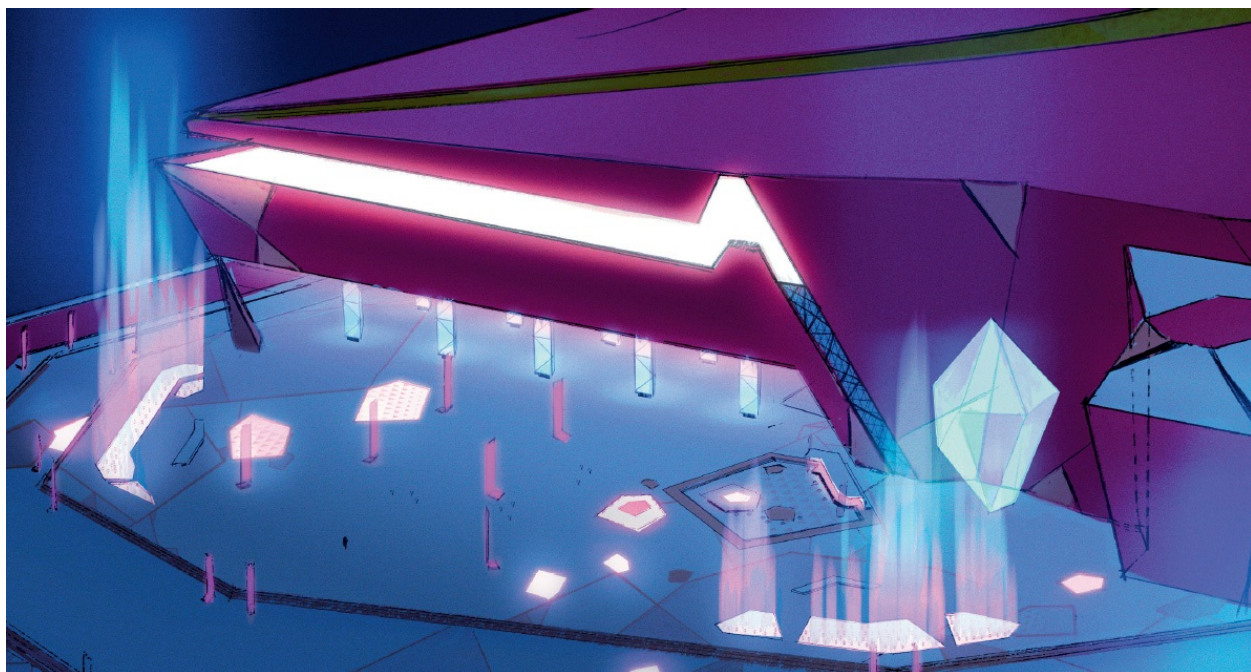
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<Mike Yamada / digital>



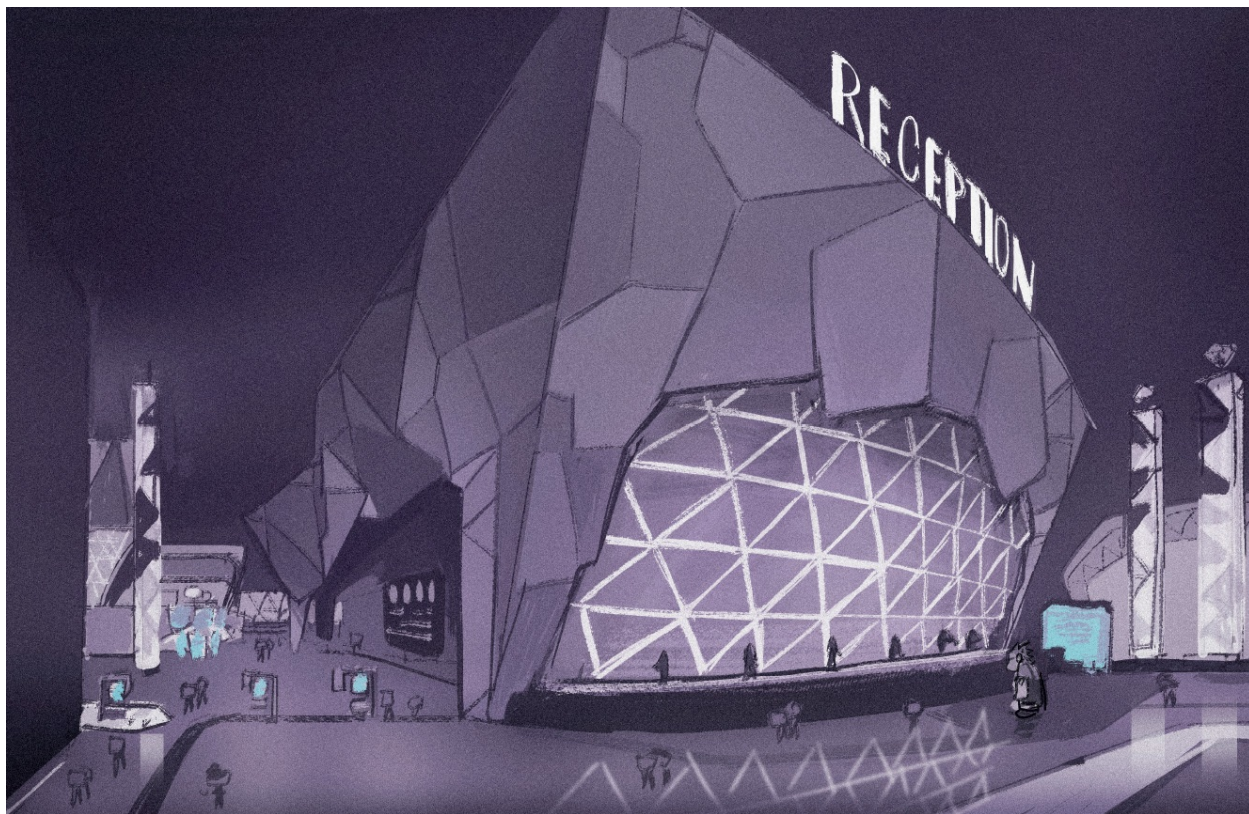
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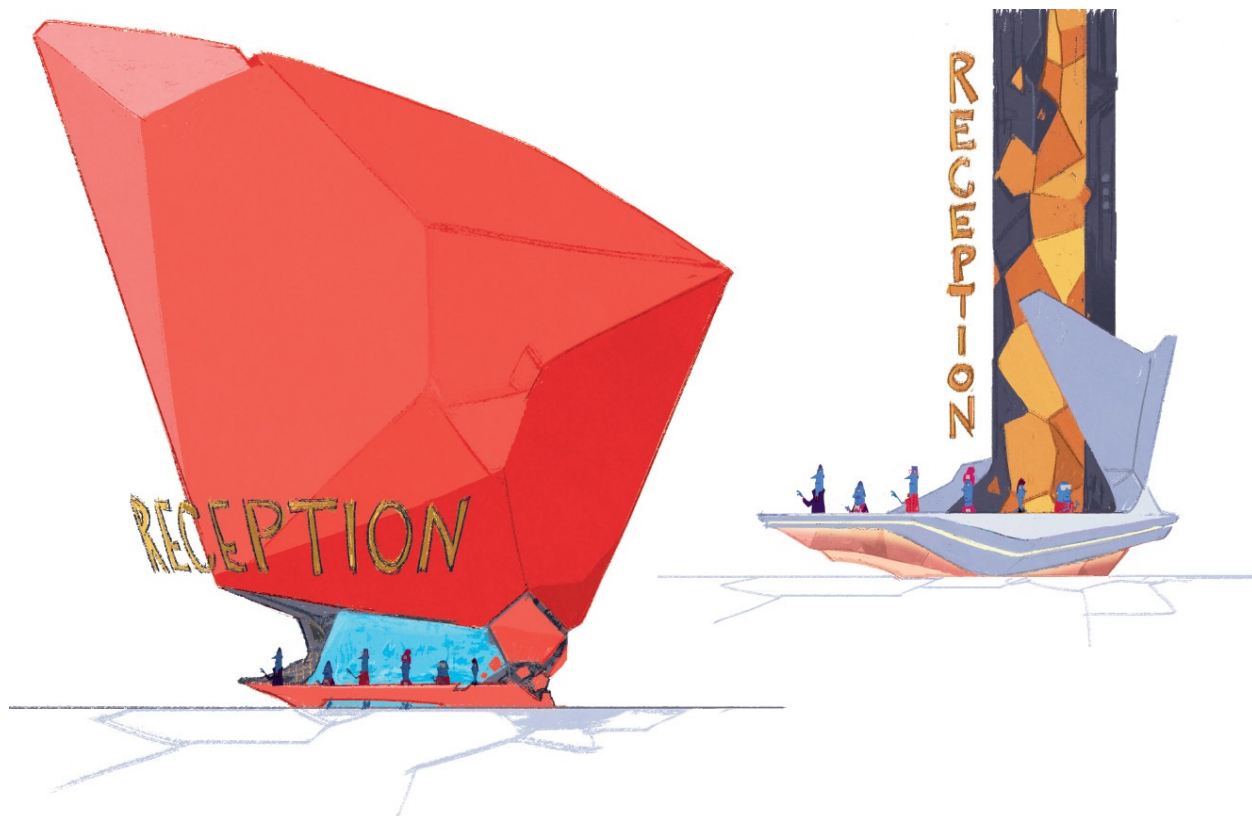
<Mingjue Helen Chen / digital>



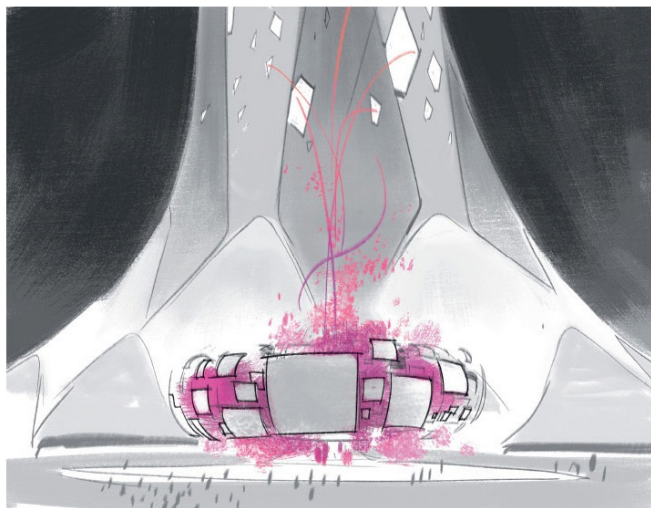
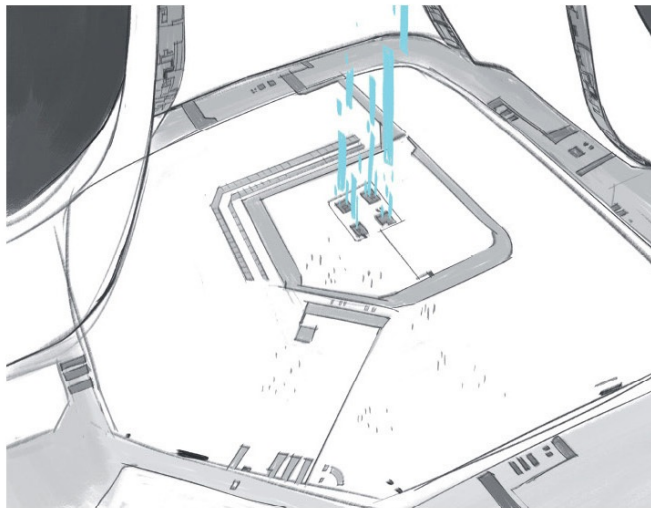
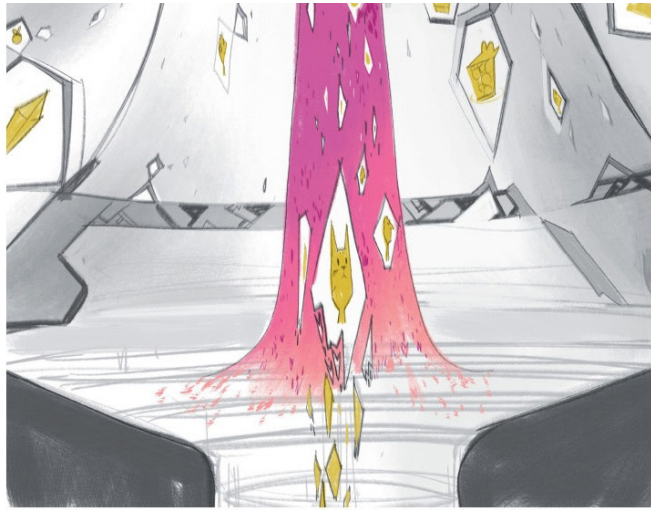
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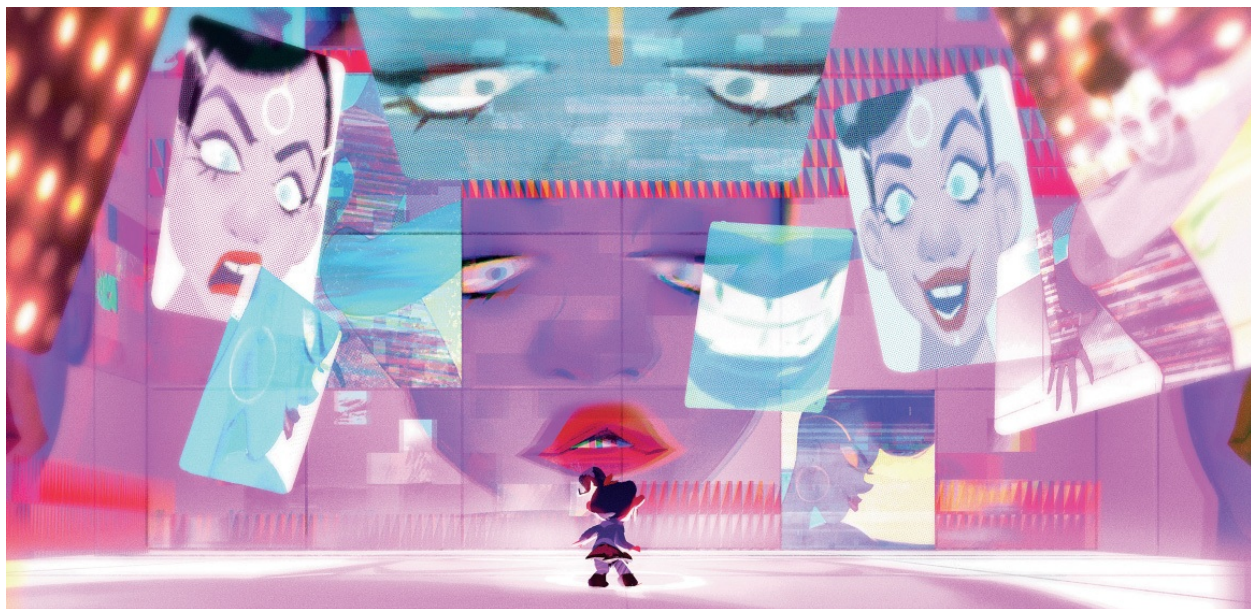
<Scott Watanabe / digital>



<Scott Watanabe / digital>



<Mike Yamada / digital>



<Mingjue Helen Chen / digital>



<Mingjue Helen Chen / digital>



<Mingjue Helen Chen / digital>



<Ryan Lang / digital>



<Ryan Lang / digital>



Ami Thompson  @ArtDirector_Characters

BuzzTube's color scheme is all magentas, reds, and purples with pops of blue in the characters. It's like the lighting at a concert.



7



5



23



<Mike Yamada / digital>

YESSS



Phil Johnston

Director · 🌐



There were many iterations of Yesss as a character. We originally conceived her as a netizen in another game who was like a cool older sister to Vanellope. As the story evolved, we tried her as a trendsetting influencer, which morphed into a version of her as a curator of the coolest stuff on the Internet. That evolved even further into a younger version of her as the most up-to-date responder to what's trending. In the end, we made Yess more like Ralph's manager: she's running a business, focused on BuzzzTube's brand.



Ami Thompson and 36 others

18 Comments



Like



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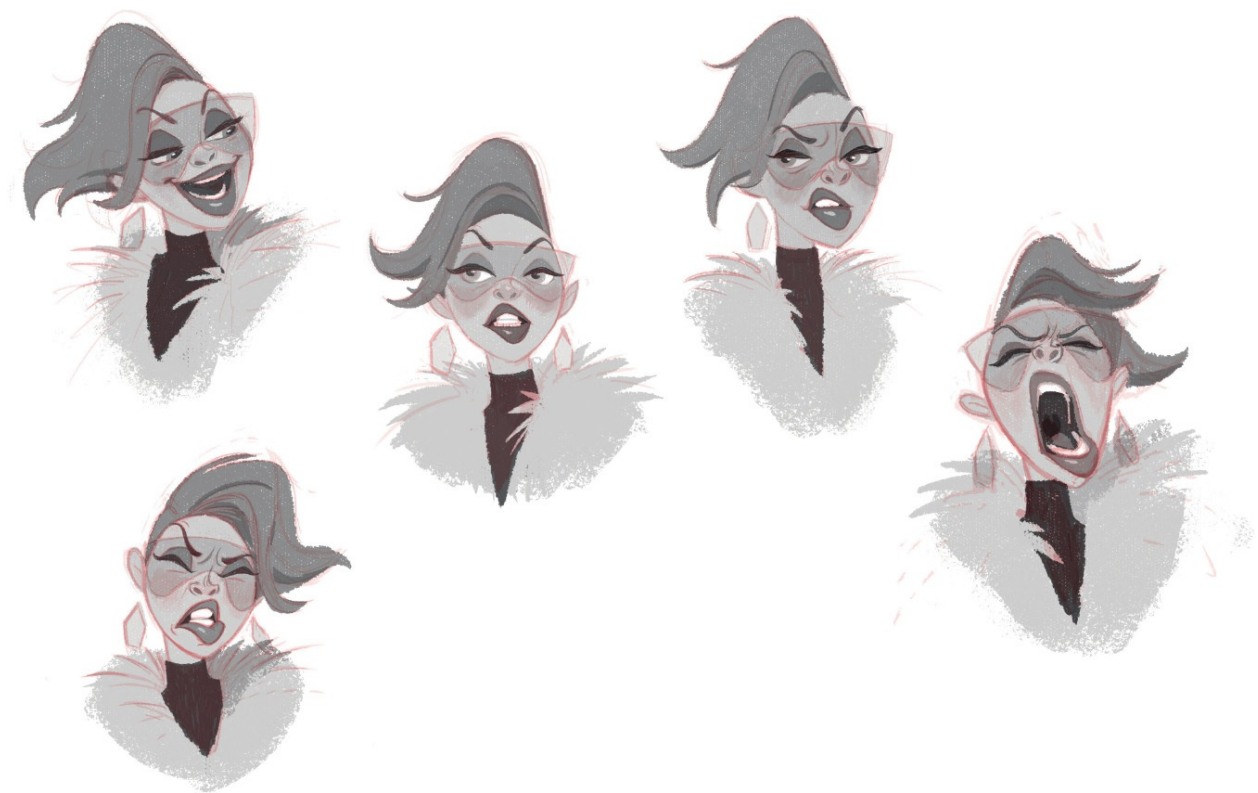
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<Ami Thompson / digital>



<Ami Thompson / digital>



<Griselda Sastrawinata / digital>



<Ami Thompson / digital>



<Meg Park / digital>



<Meg Park / digital>



Ami Thompson

Art Director, Characters · 🌐



Her design changed with every iteration. Her final look is more pushed, with a simplified shape and crisp edges. Her eyebrows are defined and sharp, with a lot of attitude in the shapes.



Mike Yamada and 29 others

4 Comments



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<Cory Loftis / digital>



<Ami Thompson / digital>



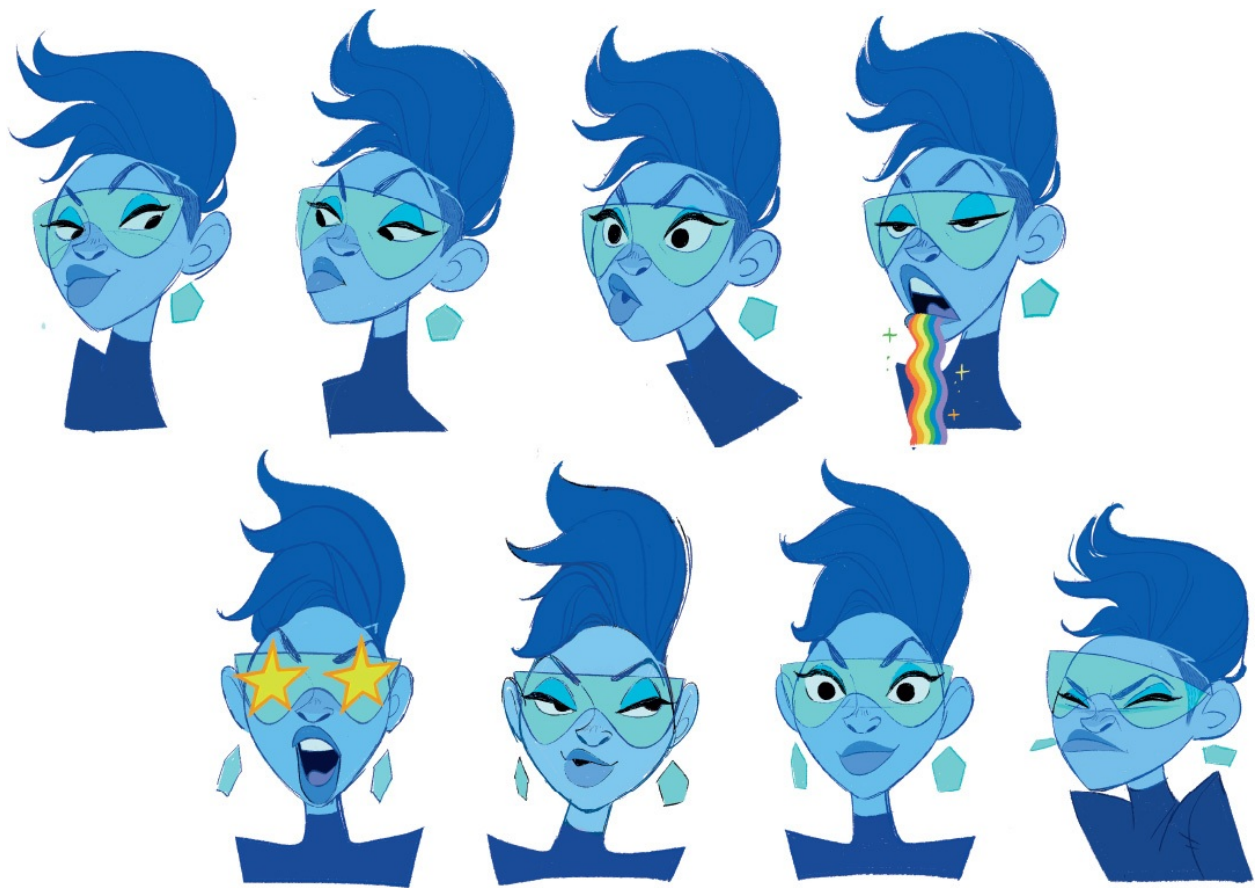
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<Nicholas Orsi / digital>



<Nicholas Orsi / digital>



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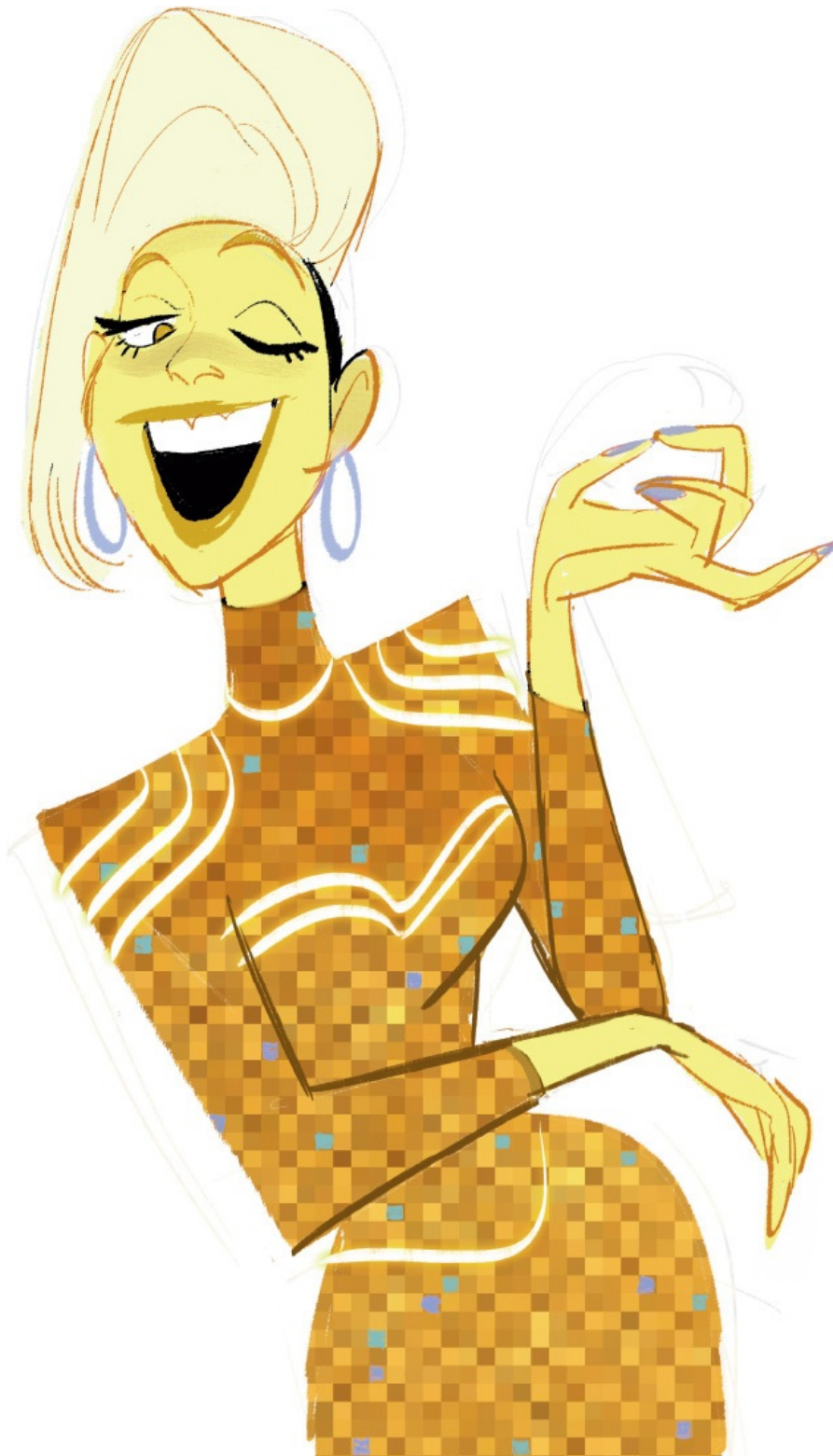
<Ami Thompson / digital>



<Ami Thompson / digital>



<Jeff Merghart / digital>



<Ami Thompson / digital>



<Ami Thompson / digital>



Cory Loftis

Production Designer · 🌐

Yesss is always about the now, the present, so she constantly changes her outfit, accessories, and hairstyles to keep up with what's current. Only her glasses and bracelet are consistent because they're the tools she uses to scan the Internet at all times.



Ernest Petti and 17 others

8 Comments



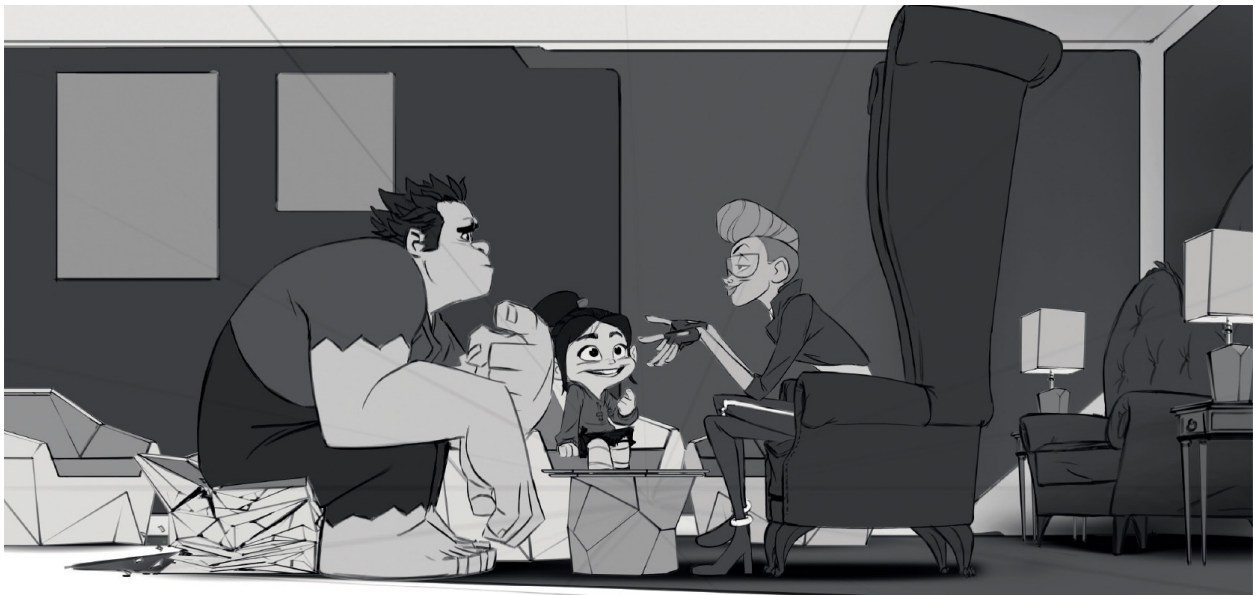
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<Ryan Lang / digital>



<Cory Loftis / digital>



<Meg Park / digital>



<Cory Loftis / digital>



<Justin Cram / digital>



Cory Loftis

Production Designer ·



There are a lot of rooms, offices, and characters in BuzzzTube: meme soundstages, VIP rooms, Sourpuss Picklecat, Yesss' assistant Maybe.



Nick Orsi and 25 others

4 Comments



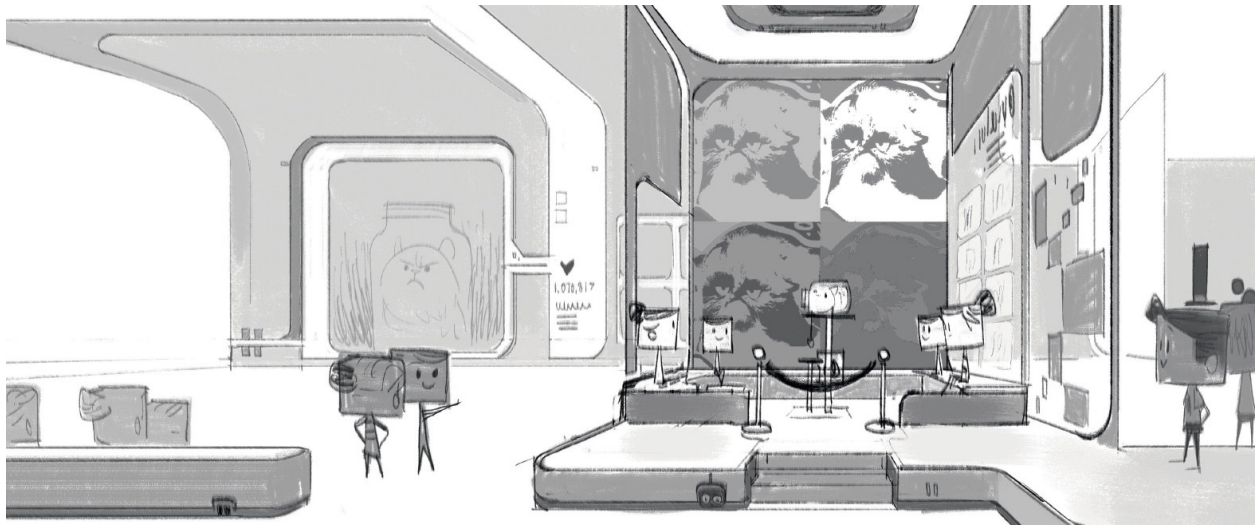
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<Mike Yamada / digital>



<Mike Yamada / digital>



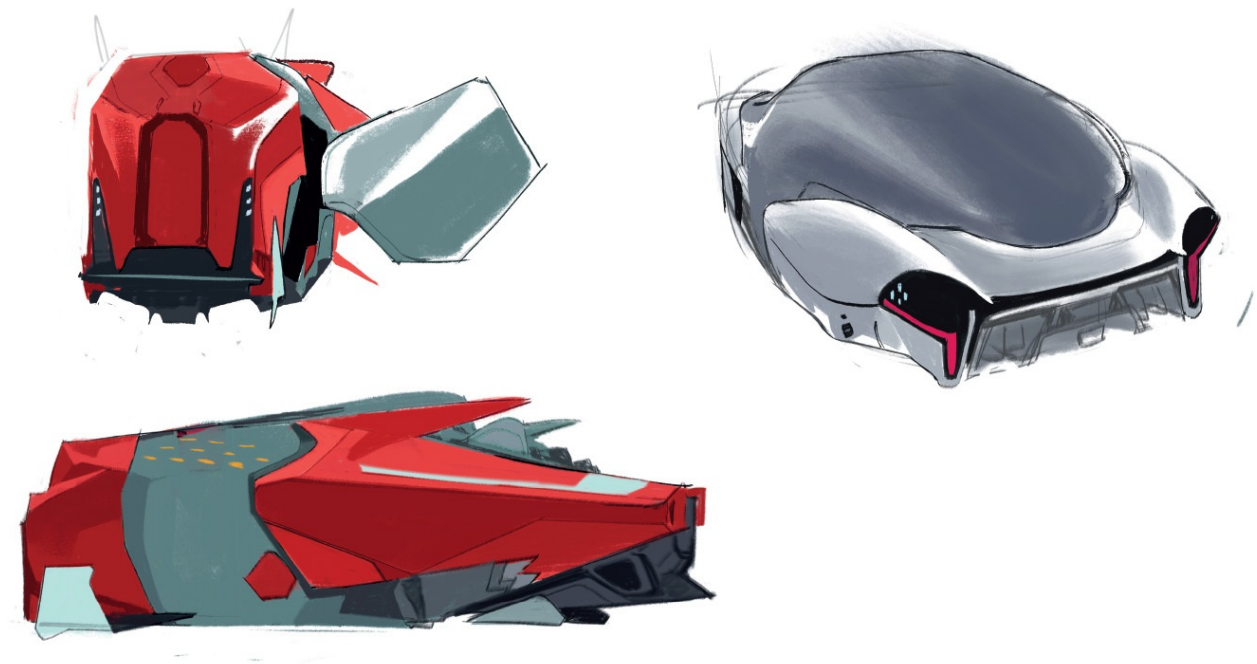
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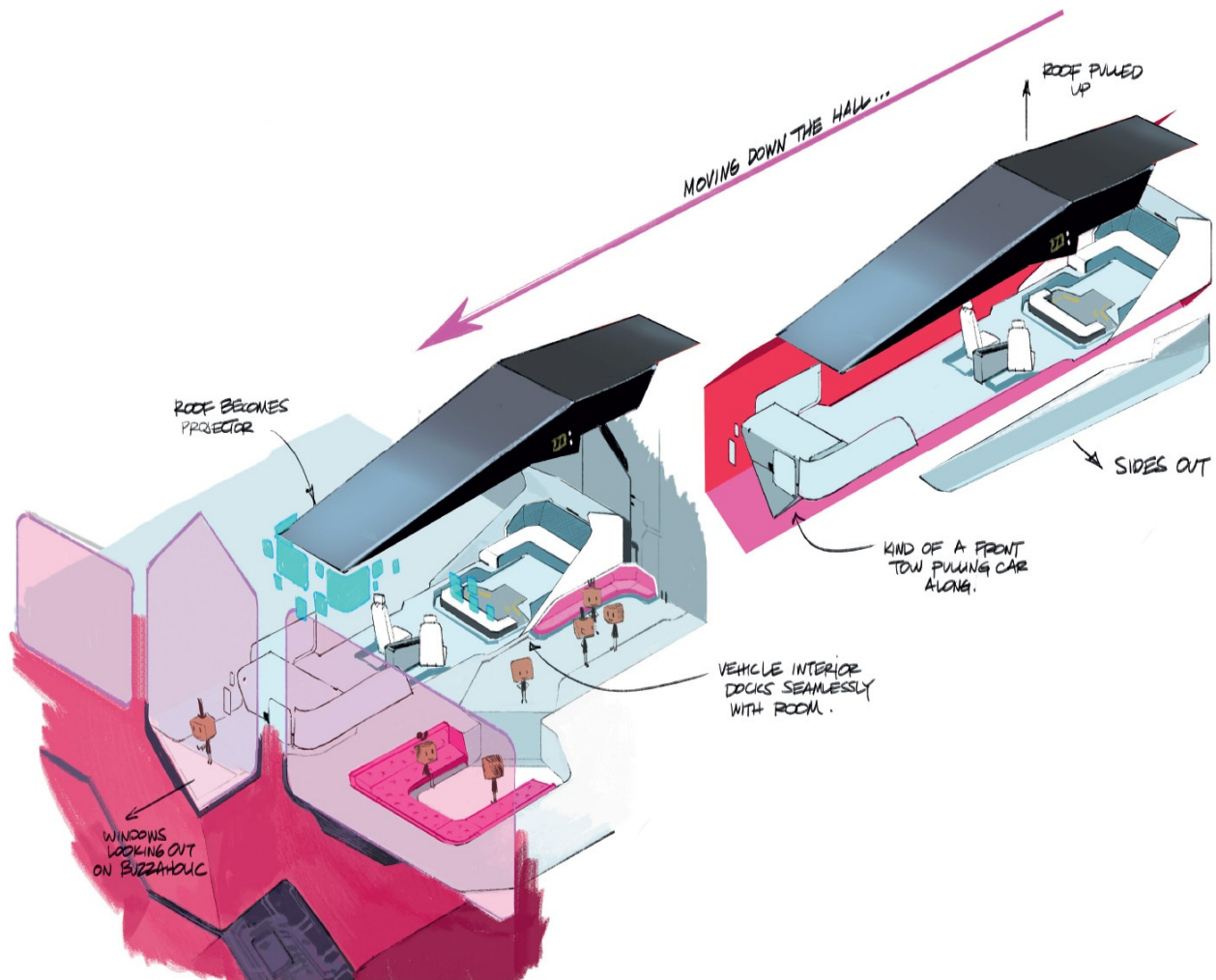


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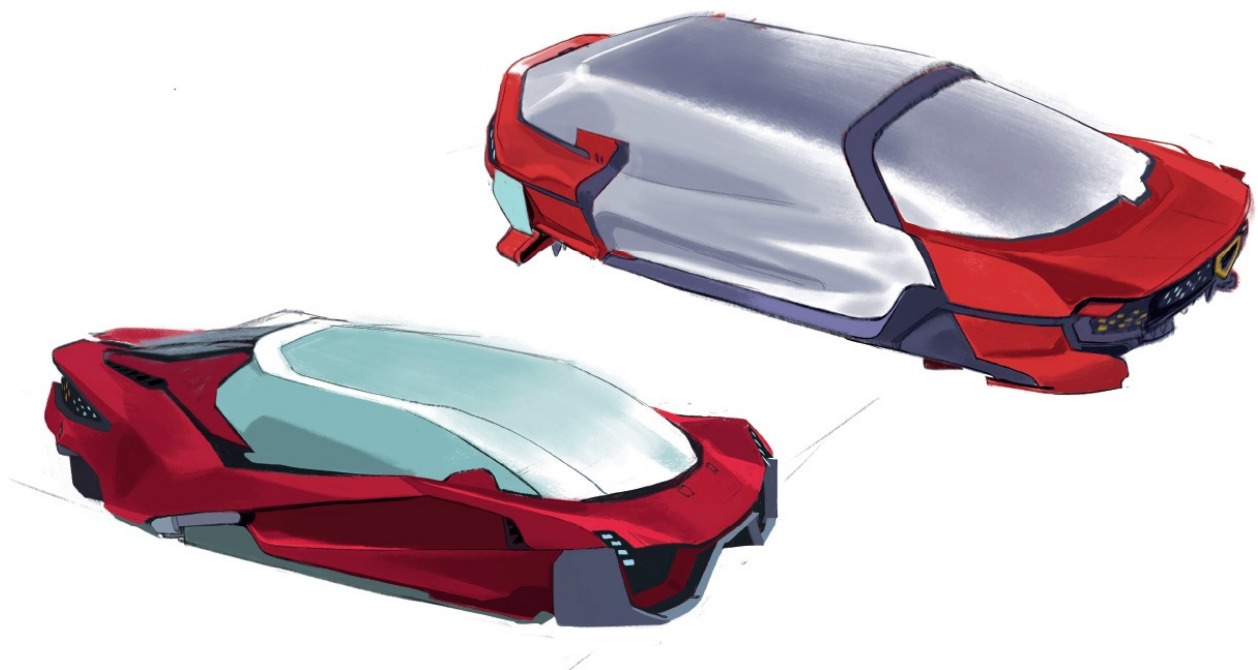


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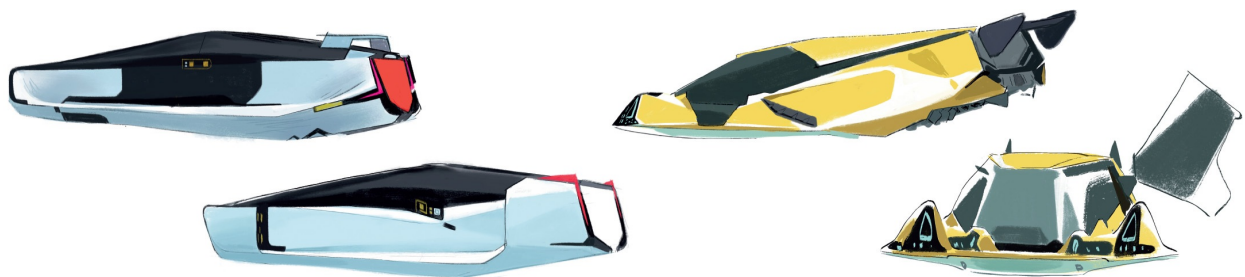




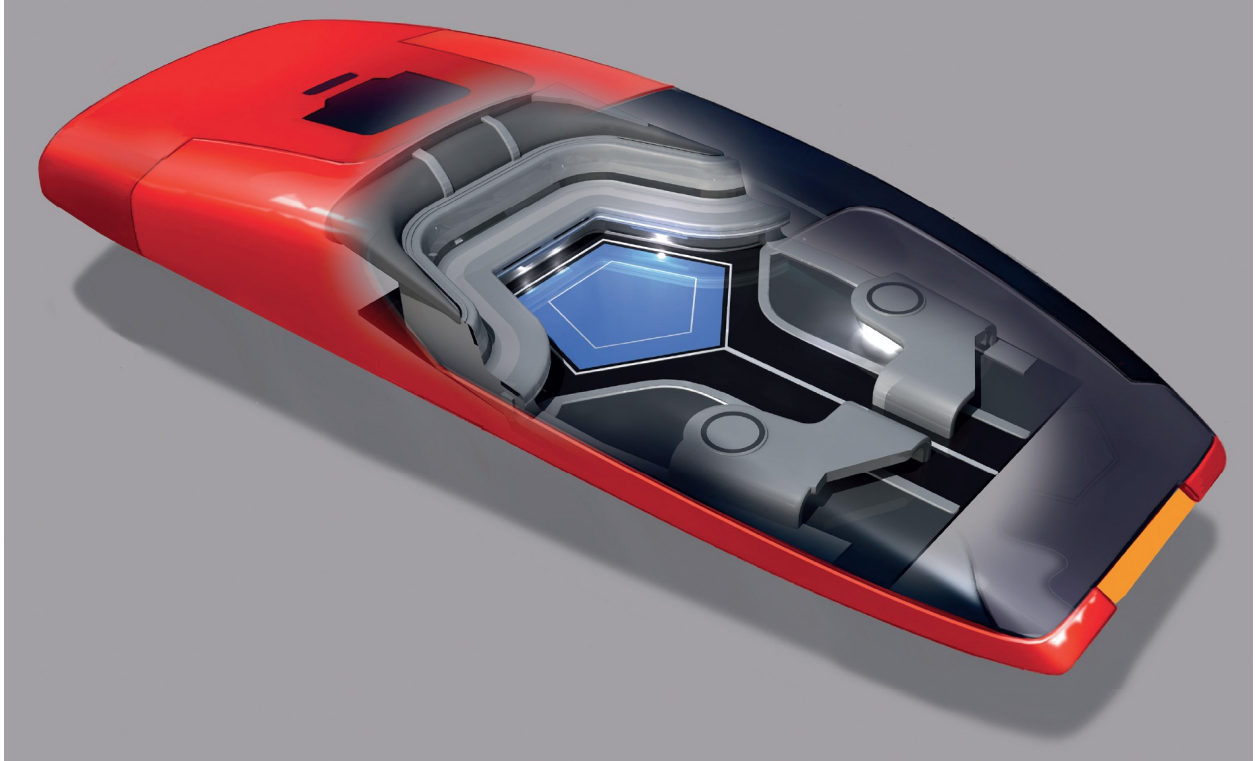
<Cory Loftis / digital>



<Mike Yamada / digital>



<Mike Yamada / digital>



<Jim Martin / digital>



Matthias Lechner



Art Director, Environments ·

Yesss' car is like a USB drive that plugs into the site. She can just walk out of it into her office.



Mehrdad Isvandi and 23 others

6 Comments



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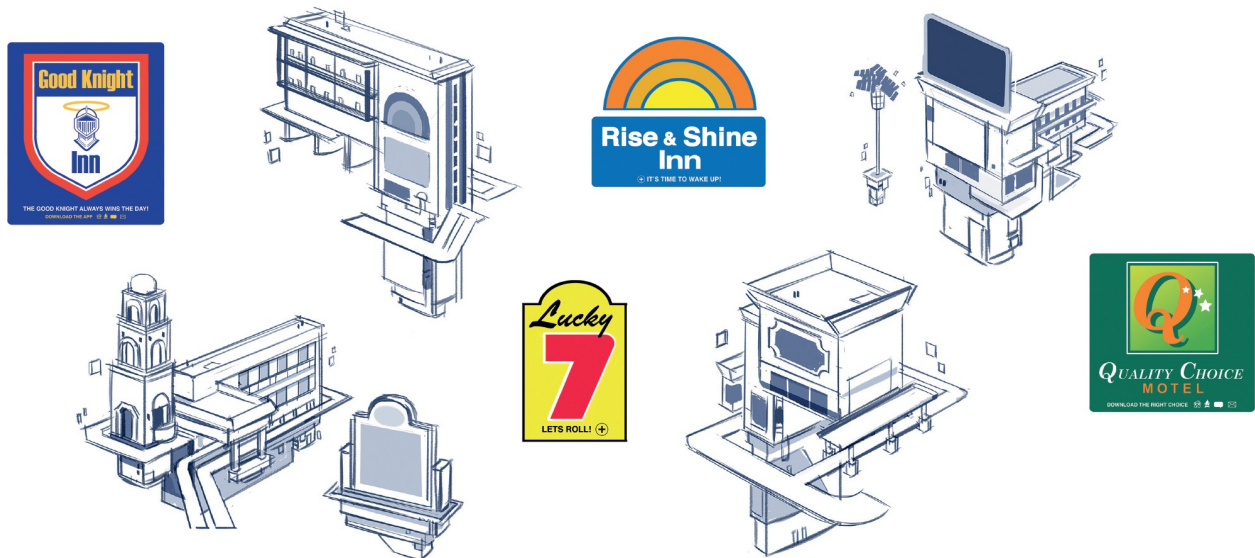


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OHMYDISNEY.COM



Mingjue Helen Chen, Associate Production Designer
OhMyDisney is like D23 Expo and a Comic-Con combined, an enormous convention hall where everything is focused on Disney. The exterior looks like Cinderella's castle, modified to fit the fantastical Internet world of the film. The color palette references the iconic pink and blue. But it's not a real building with screws and nails; if you were to switch the camera angle you'd see the pieces of it are just floating in space, almost deconstructed.



<Justin Cram / digital>

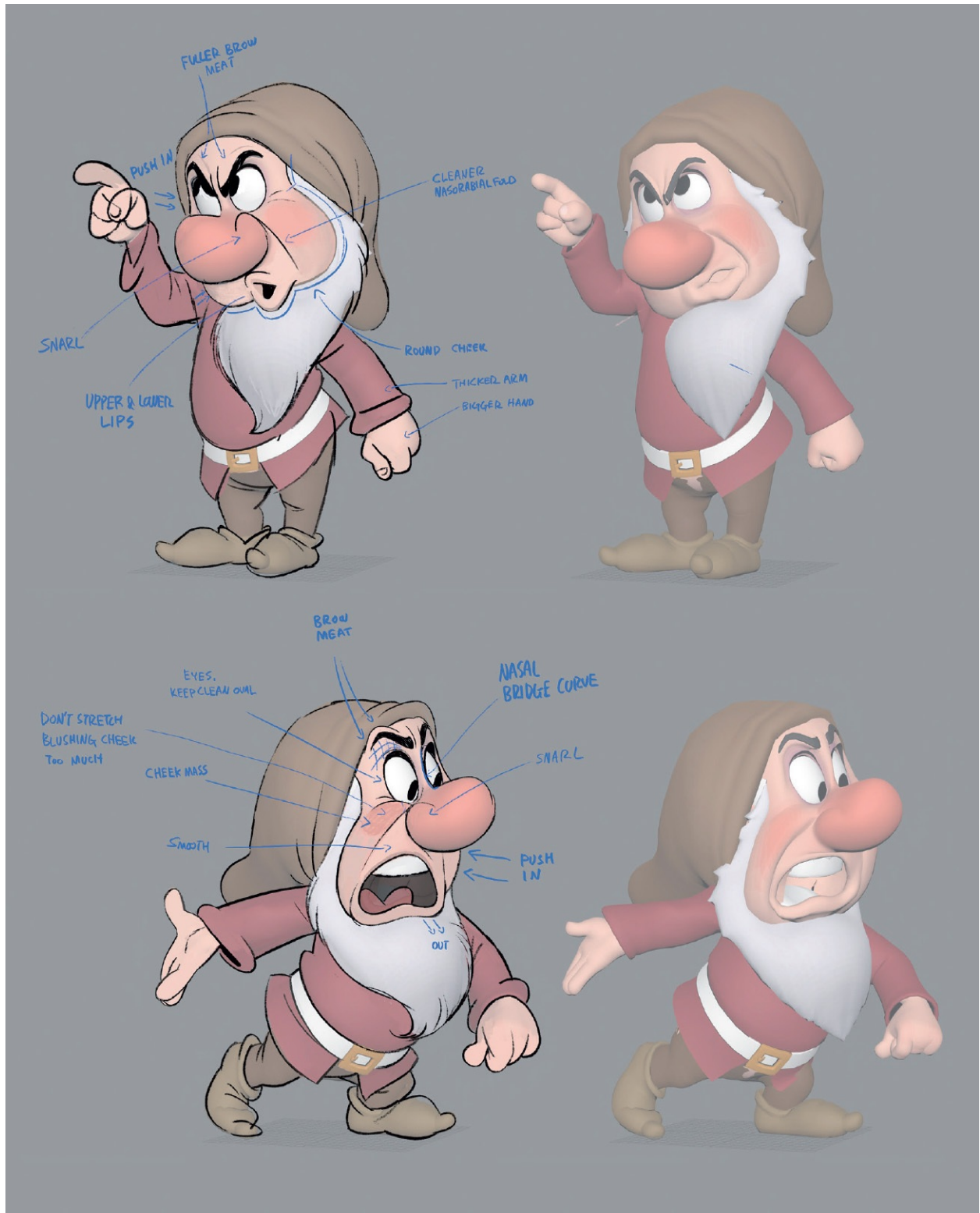


<Mingjue Helen Chen / paintover>



Cory Loftis, Production Designer

The OhMyDisney characters are like the teenage version of themselves. They are gangly, with bigger heads, feet, and hands. They have a simplified silhouette but are still recognizable as the characters from the films.



<Ami Thompson / digital>



<Jeff Merghart / digital>



<Sergi Caballer / digital>



Cory Loftis, Production Designer

One of the fun and challenging things with changing the character designs is you understand why the original artists chose certain poses for them. For example, Eeyore's signature move is dropping his head down, but with the shorter legs and bigger head he has in this film, his head would hit the ground

when he's animated.



<Fawn Veerasunthorn / digital>



<Justin Cram / digital>



<Jeff Merghart / digital>



<Mehrdad Isvandi / digital>



<Jeff Merghart / digital>



Matthias Lechner, Art Director, Environments

The interior is full of booths that highlight Disney, Pixar, Marvel, Lucasfilm, and so on. The Princess Room is the heavily guarded dressing room of the Disney Royal Court. It's a behind-the-scenes place where the princesses can hang out. We visited the "Dream Suite" at Disneyland for research.



<Lissa Treiman, Jason Hand / digital>



Kira Lehtomaki, Head of Animation

We met with each of the actresses who voice the princesses. They think about their characters in such a deep way. Jennifer Hale, the voice of Cinderella for the last twenty years, describes Cinderella as “the queen of coping”—she makes the best of anything you throw at her. Jasmine is used to more luxury than Cinderella, but she also fights for what is good and right, she will question authority when she needs to. We try to work those unique personality traits into each of the princesses. They each have their own set of wants, goals, and personalities, and we want that to shine through.



<Mehrdad Isvandi / digital>



<Lorelay Bove / digital>



<Mike Yamada / digital>

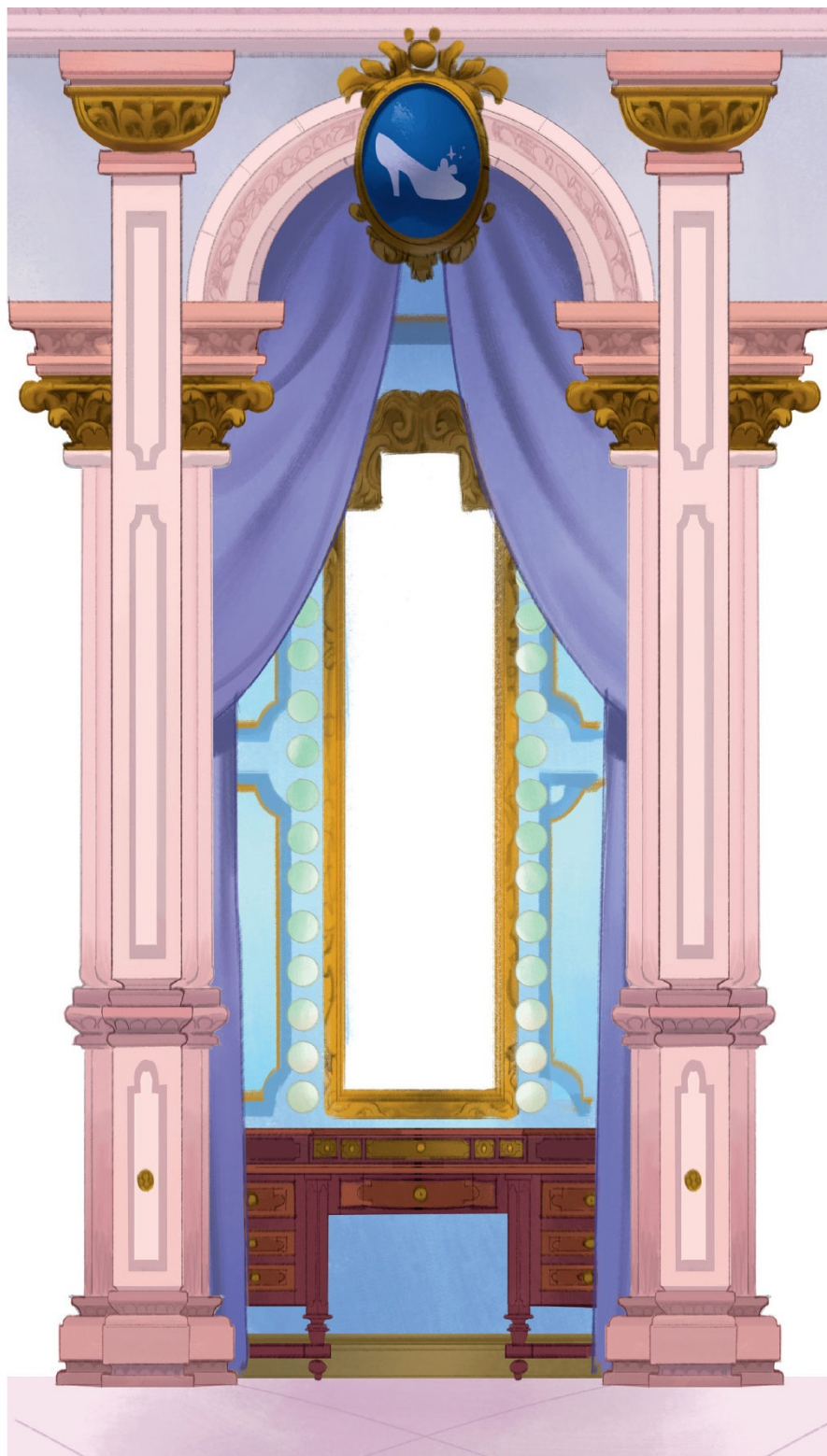


Matthias Lechner, Art Director, Environments

Each princess has her own cubbie filled with personal items:

Belle's books, Mulan's sword, the picture Tiana ripped out of the magazine, Ariel's collection of thingamabobs. Some are jokes:

Aurora has coffee, Cinderella's clock is frozen at midnight.



<Mike Yamada / digital>



Matthias Lechner, Art Director, Environments

It's intimidating to make even a small change to one princess, and we had to come up with a new style for each of them. It helped that these aren't the real princesses from the films, they are Internet versions of those characters.



<Brittney Lee, Ami Thompson / digital>



<Brittney Lee, Ami Thompson / digital>



<Cory Loftis / digital>



<Ami Thompson / digital>

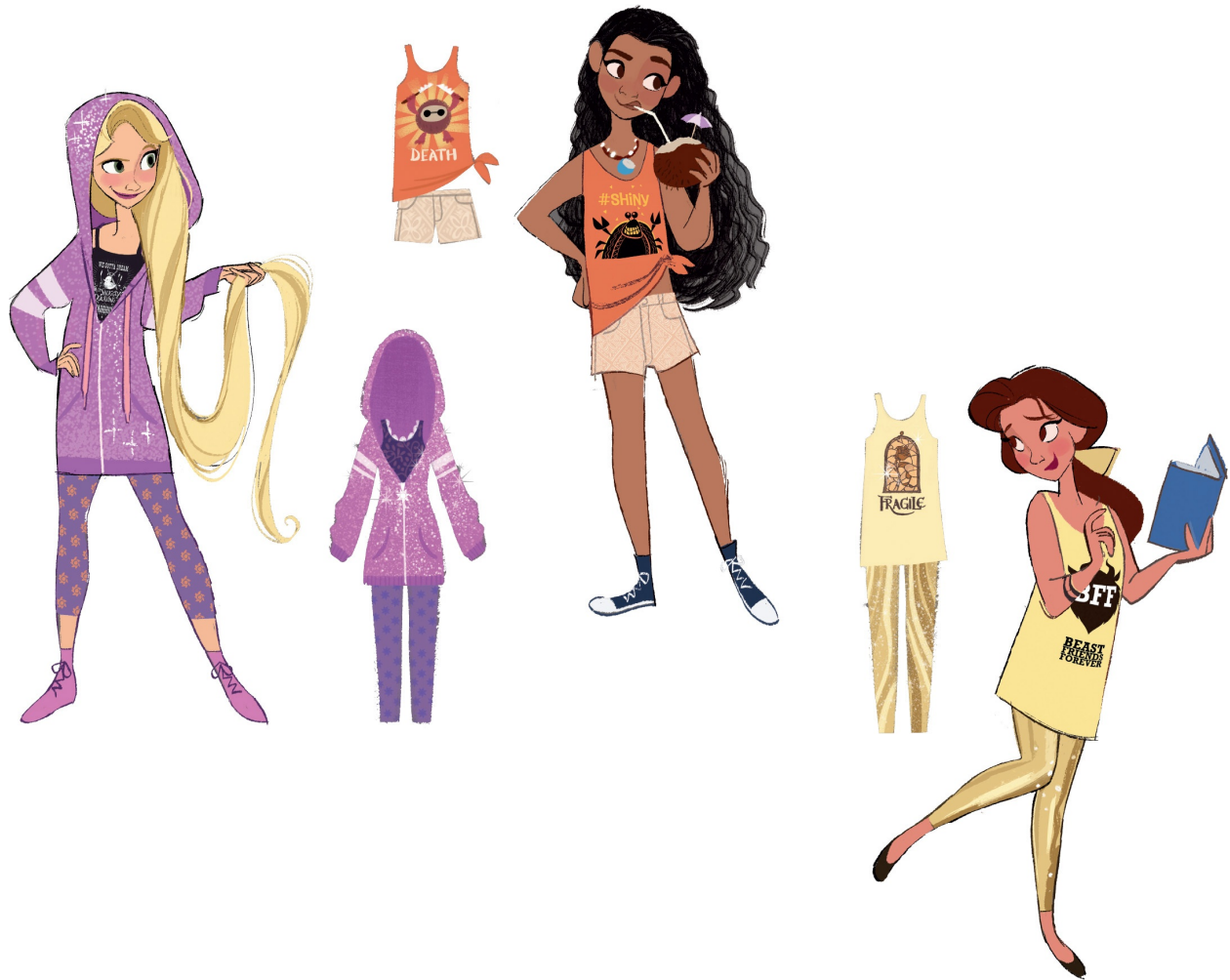


<Griselda Sastrawinata / digital>



Ami Thompson, Art Director, Characters

Their casualwear is something they could wear relaxing at home, inspired by Vanellope's comfortable clothes. Each outfit's design relates to the Internet version of them.



<Character Art: Ami Thompson / digital>
<Clothing: Griselda Sastrawinata, Ami Thompson / digital>



<Ami Thompson / digital>



<Griselda Sastrawinata / digital>



<Character Art: Ami Thompson / digital>
<Clothing: Griselda Sastrawinata, Ami Thompson / digital>



<Griselda Sastrawinata / digital>



<Cory Loftis / digital>



<Cory Loftis / digital>



Mark Henn, Animator

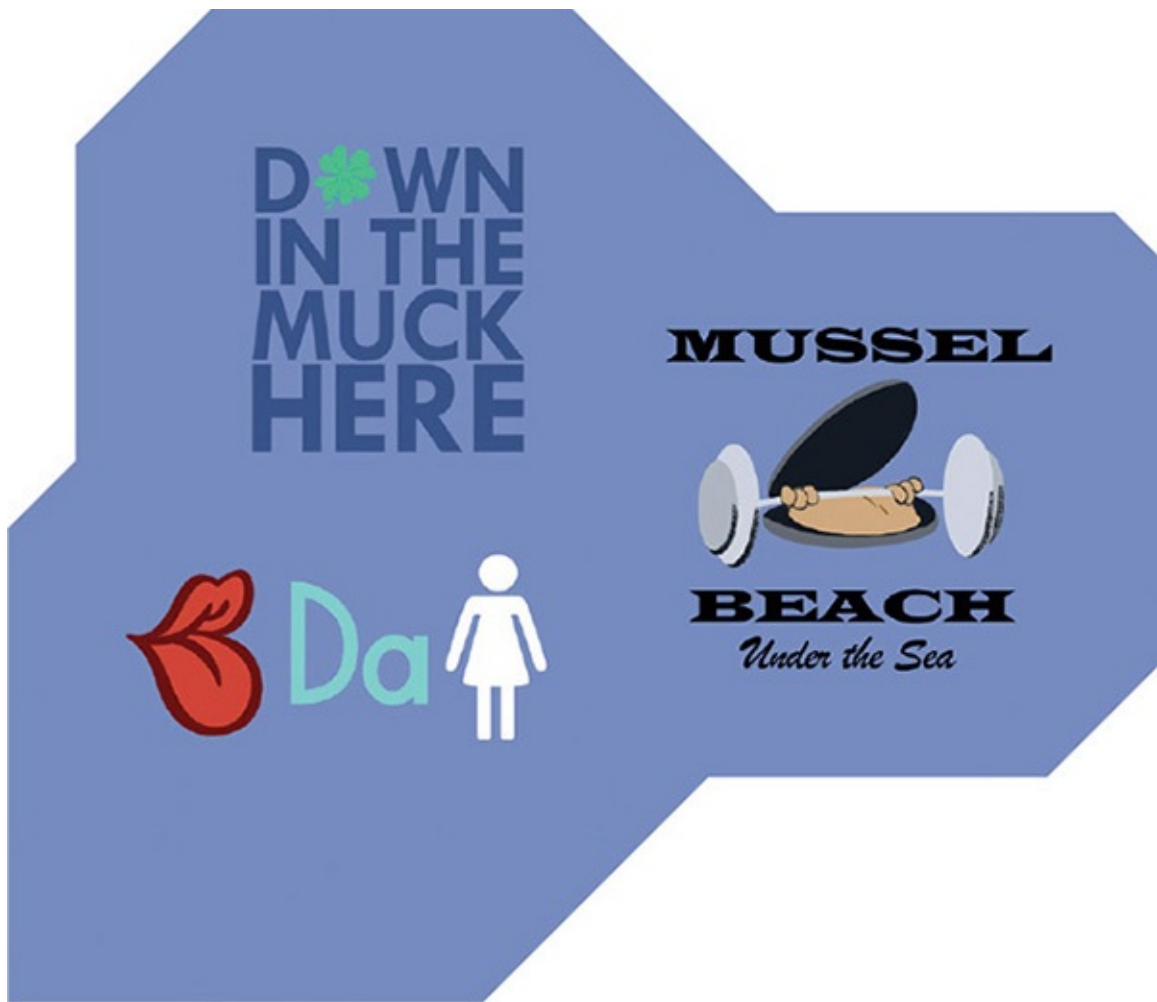
It's not often an animator gets to revisit a past character; I hadn't animated Ariel since the original film in 1989. One challenge was trying to find a balance between traditional animation and the digital world of *Wreck-It Ralph 2*. I animated a few test scenes to show how the new designs could be fully animated for this film while still maintaining the integrity of the original designs. And it was such a treat to host a meet-and-greet discussion for the animation team with each of the voice talents as they came in to record their lines.



<Lorelay Bove, Cory Loftis / digital>



<Griselda Sastrawinata / digital>



<Cory Loftis / digital>



Ami Thompson, Art Director, Characters

The OhMyDisney version of the princesses is more cartoony, with bigger eyes and ears, a graphic mouth shape. But we kept the color schemes from their iconic dresses, and maintained something close to their original hairstyles even when they're in comfy outfits.



<Lorelay Bove, Cory Loftis / digital>

CRASH OVERRIDE



<Paul Felix / digital>



[–] **Jessica Julius** Author Ralph very nearly takes down the Internet in this film. How does that happen?

[permalink](#) [embed](#)



[–] **Phil Johnston** Director After Ralph eavesdrops on Vanellope telling Shank she wants to stay in Slaughter Race, he decides to release a virus into the game that would slow it down enough that she'd want to leave. It wasn't supposed to hurt anyone but it gets out of control. As the game crashes around them, Ralph accidentally touches the virus, which then begins to replicate him, manifesting as millions of Ralph clones.

[permalink](#) [embed](#) [parent](#)



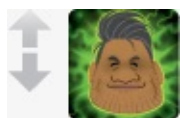
[–] **Rich Moore** Director We were inspired by the last line of the first movie—"If that kid likes me, how bad can I be?" It's a great sentiment but it can also be really dysfunctional. Ralph is defining himself by how Vanellope feels about him, and when she starts to pull away his insecurities are aggravated. Viruses prey on vulnerabilities, which is why this one grows so strong after being in contact with Ralph. The clones are the personification of Ralph's insecurities. While desperately searching for Vanellope, the clones jam up websites so users can't get in, which to the outside world looks like a denial of service attack. Inside the Internet, the clones create havoc and destruction, causing sites to literally crash.

[permalink](#) [embed](#) [parent](#)



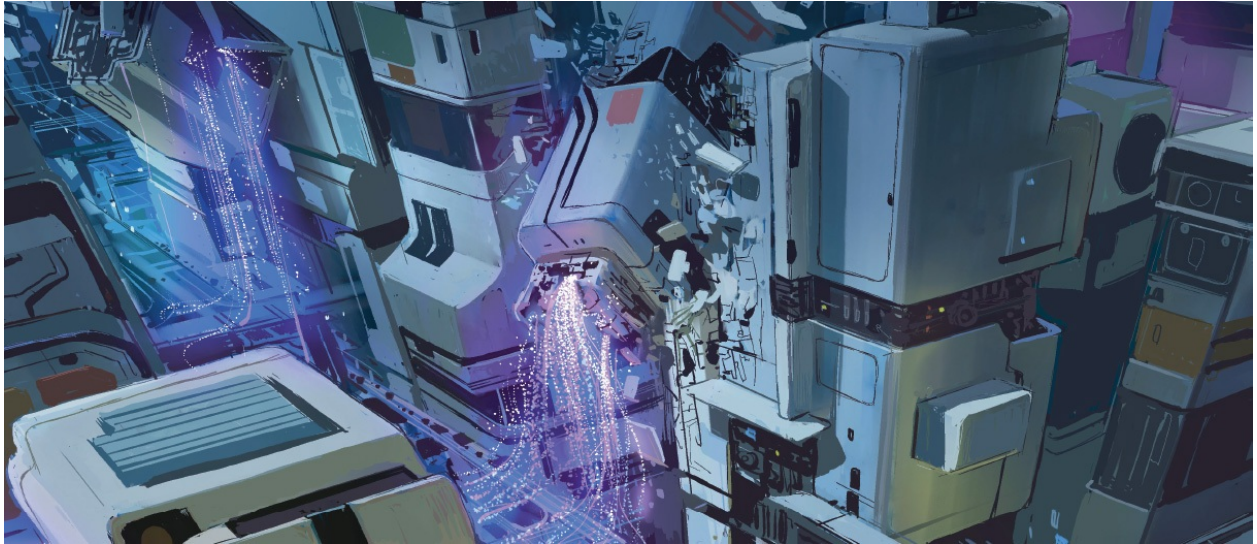
[–] **Jessica Julius** Author Were there any specific design challenges to wrecking the Internet?

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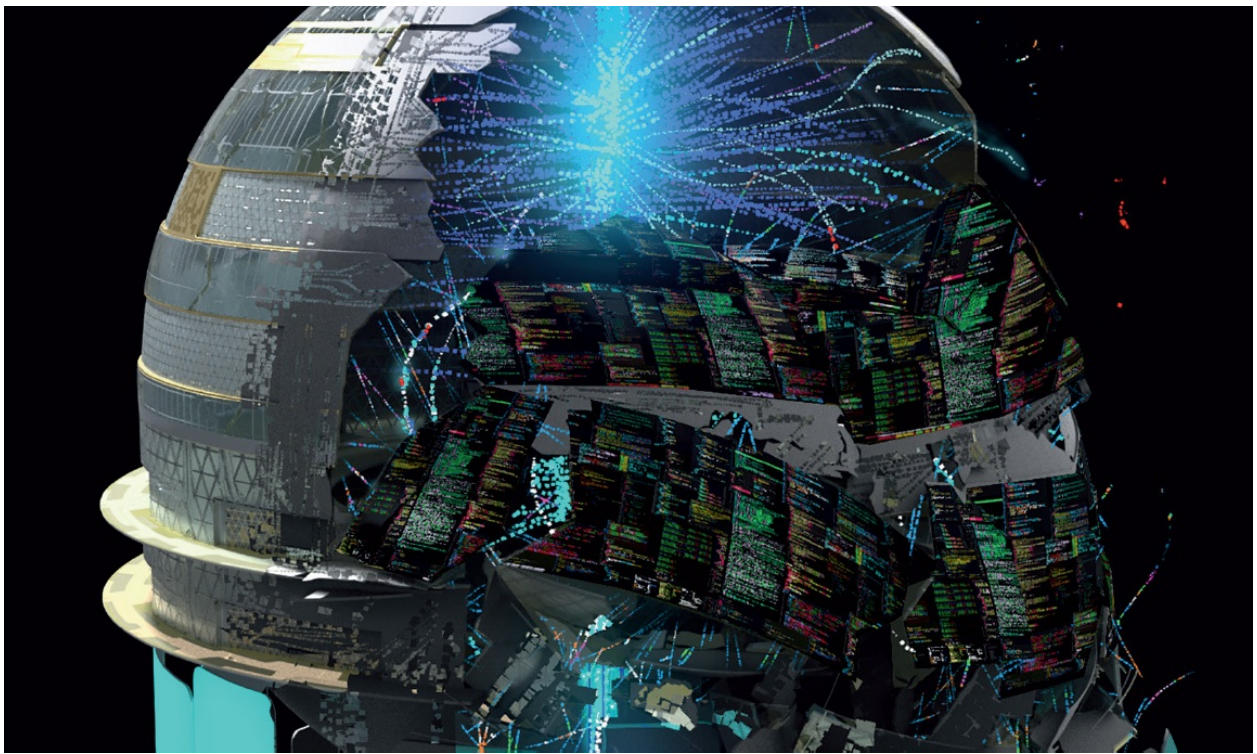


[–] **Cesar Velazquez** Head of Visual Effects Destroying our assets is not a trivial task. We had to institute a whole new tool set to handle all the destruction that happens in this film. We have characters with hair, environments with vegetation, buildings made out of glass, all designed and modeled to look good from certain camera angles. When they're destroyed, they still have to look right from an art standpoint while also being structurally accurate. Instead of breaking a wooden beam or brick in half we're breaking it on a digital level.

[permalink](#) [embed](#) [parent](#)



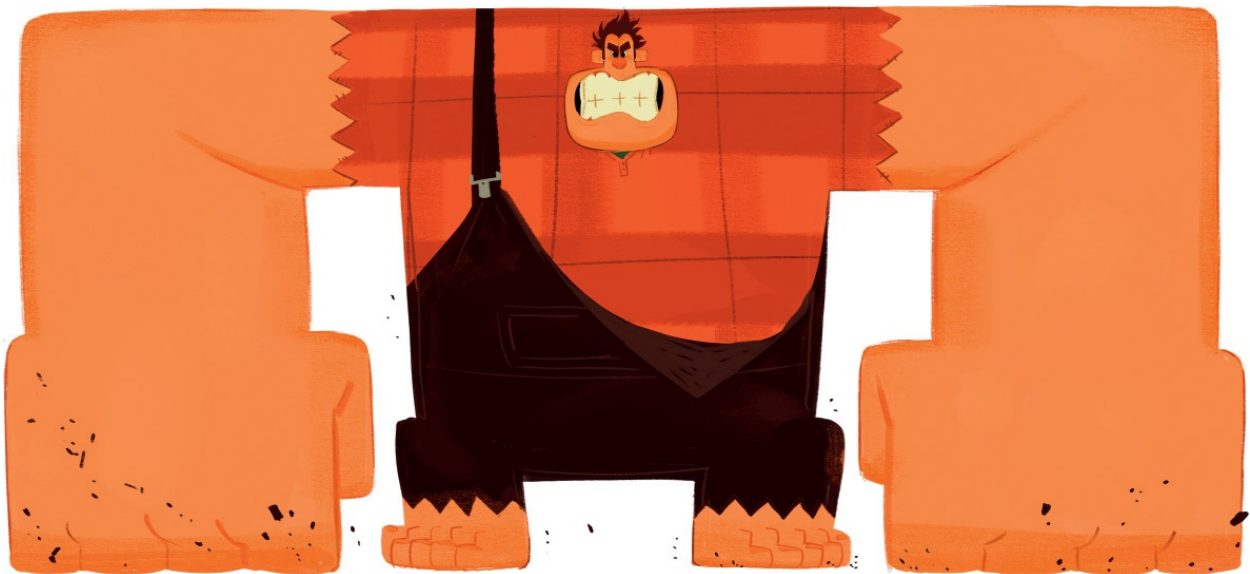
<Paul Felix / digital>



<Sara Cembalisky / digital>



<Nicholas Orsi / digital>



<Ami Thompson / digital>



Phil Johnston

Director · 🌐



The giant Ralph is a gross, roiling blob made up of millions of individual Ralph clones.



Mingjue Helen Chen and 29 others

12 Comments



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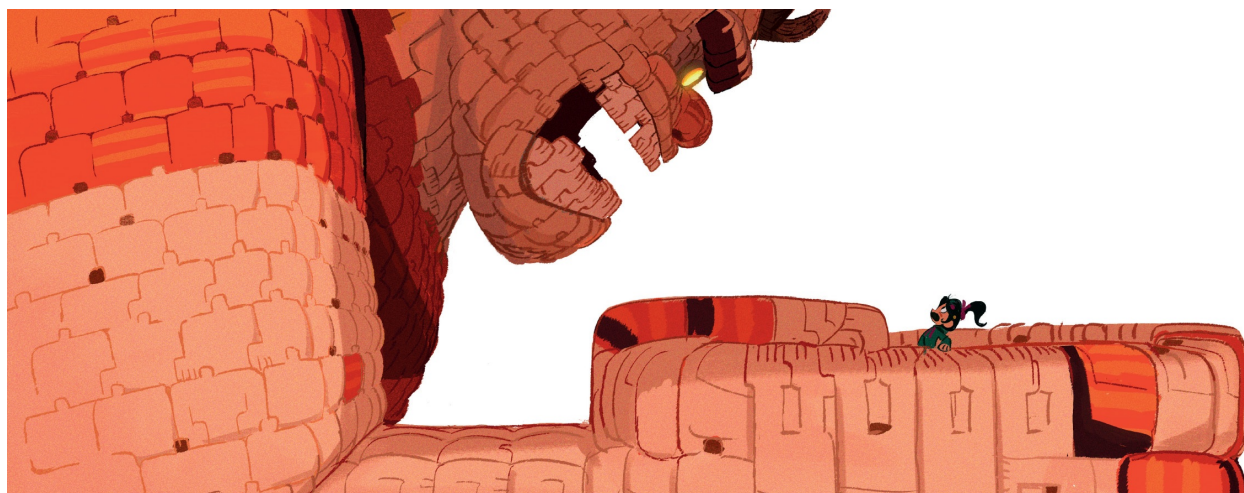
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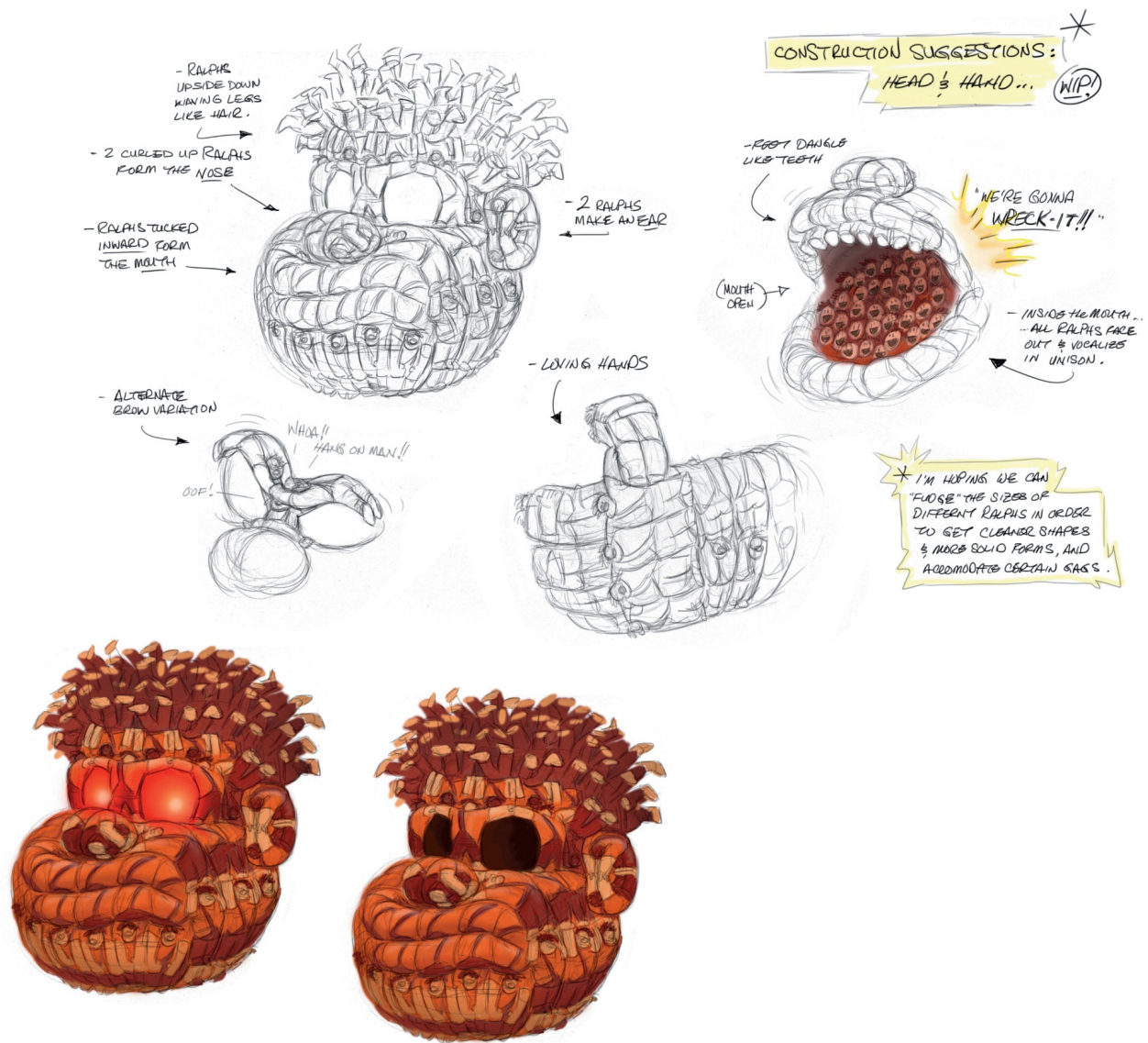
<Ami Thompson / digital>



<Ami Thompson / digital>



<Ami Thompson / digital>



<Jeff Merghart / digital>



Rich Moore

Director · 🌐

The clones are a more grotesque version of Ralph. There's no life behind their eyes, they have monochromatic, muted colors. They don't have the appeal that Ralph does. Even though Ralph has his foibles, he's endearing. The clones are not endearing.



Phil Johnston and 25 others

13 Comments



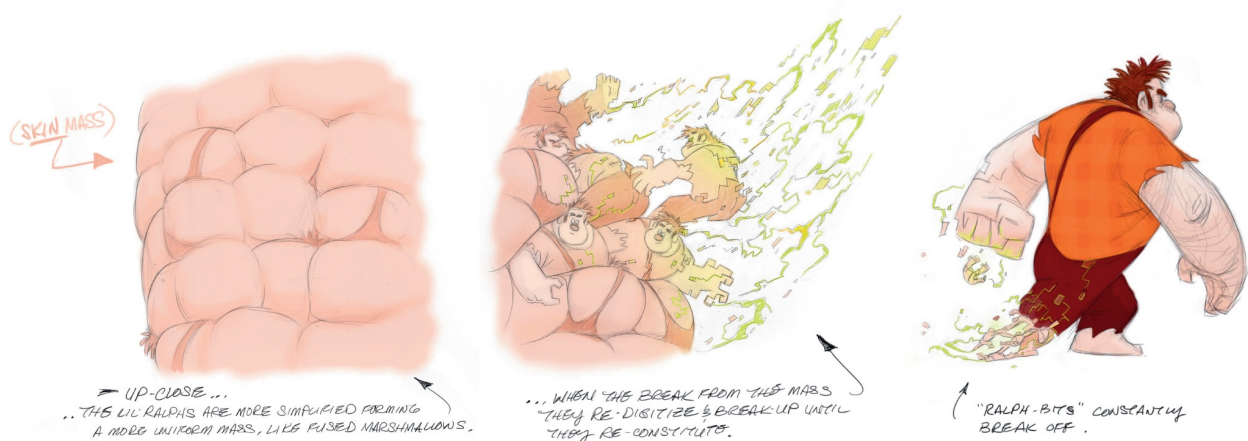
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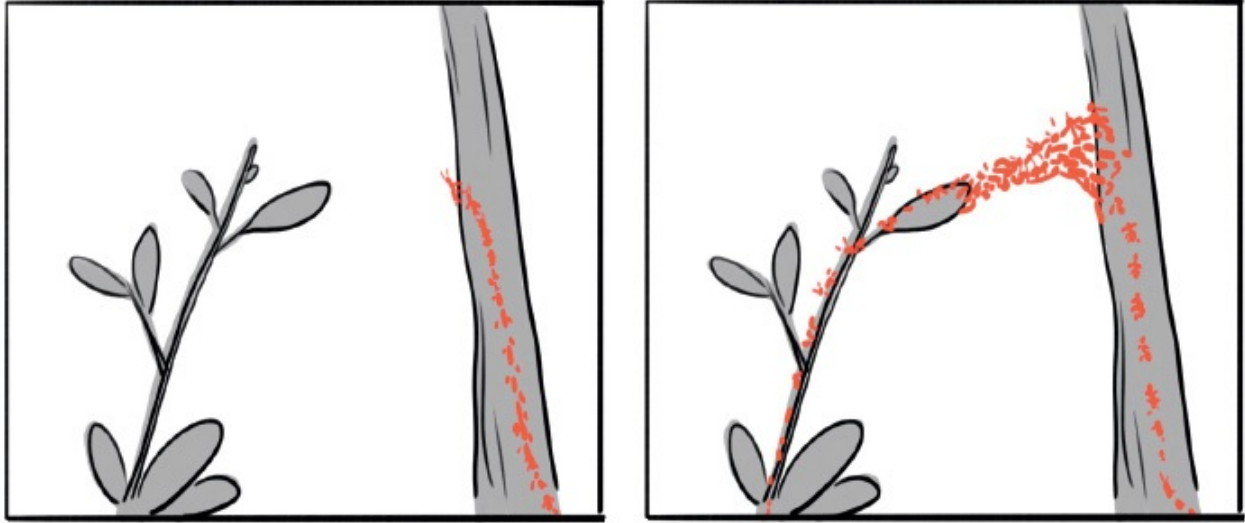
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<Jeff Merghart / digital>



fire ants can lock together to
form towers, bridges, and even rafts!

<Natalie Nourigat / digital>



Phil Johnston

Director · 



We had to make sure the clones didn't feel like sentient beings because ultimately, we have to get rid of them. It was a challenge to make them look like Ralph, yet have the audience root for them to be deleted.



Kira Lehtomaki and 18 others

6 Comments



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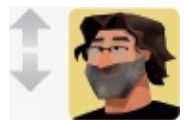
<Ami Thompson / digital>

THE DARKNET



[–] **Jessica Julius** Author At one point, Ralph ends up in the Darknet. What is that exactly?

[permalink](#) [embed](#)



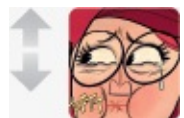
[–] **Matthias Lechner** Art Director, Environments There are multiple levels to the Internet. There's the surface web, which is the part users mainly interact with. Beneath that are areas less easily accessed, like data storage and content behind paywalls, which have a more industrial design. And under that is the Darknet, where the questionable stuff happens.

[permalink](#) [embed](#) [parent](#)



[–] **Cory Loftis** Production Designer Up on the surface web you see users and netizens. But the Darknet is mostly netizens. The average user can't get there. Everyone down there wants to remain anonymous, so their hoods are up, they wear masks. And the environment changes depending on the encryption level, so some things aren't visible until you get special glasses or an access card to see them.

[permalink](#) [embed](#) [parent](#)



[–] **Ami Thompson** Art Director, Characters Ralph only gets to the Darknet because the netizens Spamley and Gord help him.

[permalink](#) [embed](#) [parent](#)



Jim Martin, Visual Development Artist

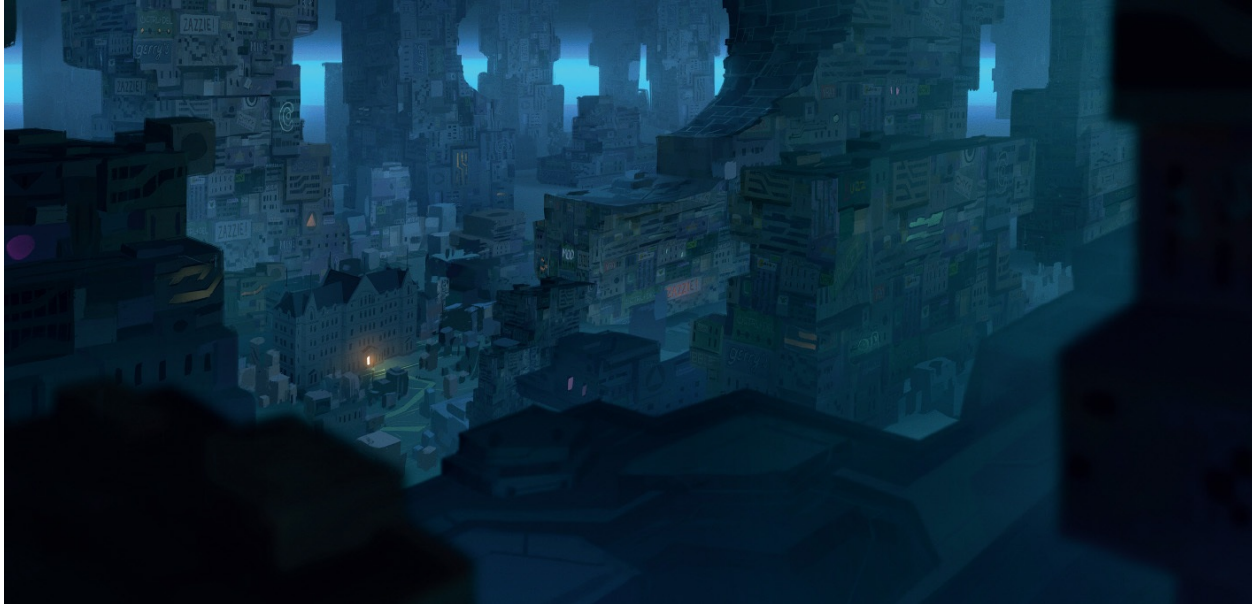
The original idea for the Darknet was that it was the foundation of the Internet. It was made up of discarded sites, with new sites built on top of the old ones from the ground up.



<Ryan Lang / digital>



<Ryan Lang / digital>



<Mingjue Helen Chen / digital>



Matthias Lechner, Art Director, Environments

Originally we called it the Oldernet and it was basically the 1990s version of the Internet. The Netscape symbol is there but it has fallen down, a Y2K ticker is stopped at midnight, there are old chat rooms, and users travel by the super slow Dial-Up Express.



<Ryan Lang / digital>

JP SPAMLEY & GORD



<Ami Thompson / digital>



<Ami Thompson / digital>



Cory Loftis, Production Designer

Spamley was inspired by salesmen that can't make a sale. He's a fragile character, hanging on by a thread. In his mind, he's trying to run an honest business but no one is clicking on his links. He's annoying but he's not trying to cheat people, which is

why he's so touched when Ralph pays attention to him.



<Cory Loftis / digital>



Ami Thompson, Art Director, Characters

Gord is Spamley's assistant. He's like a sloth and a pug mixed together, with a little bit of praying mantis tossed in. He doesn't talk but he knows what Spamley needs almost before Spamley does. Gord has a bit of virus in him, so he knows the secrets of the Darknet and how to find it.



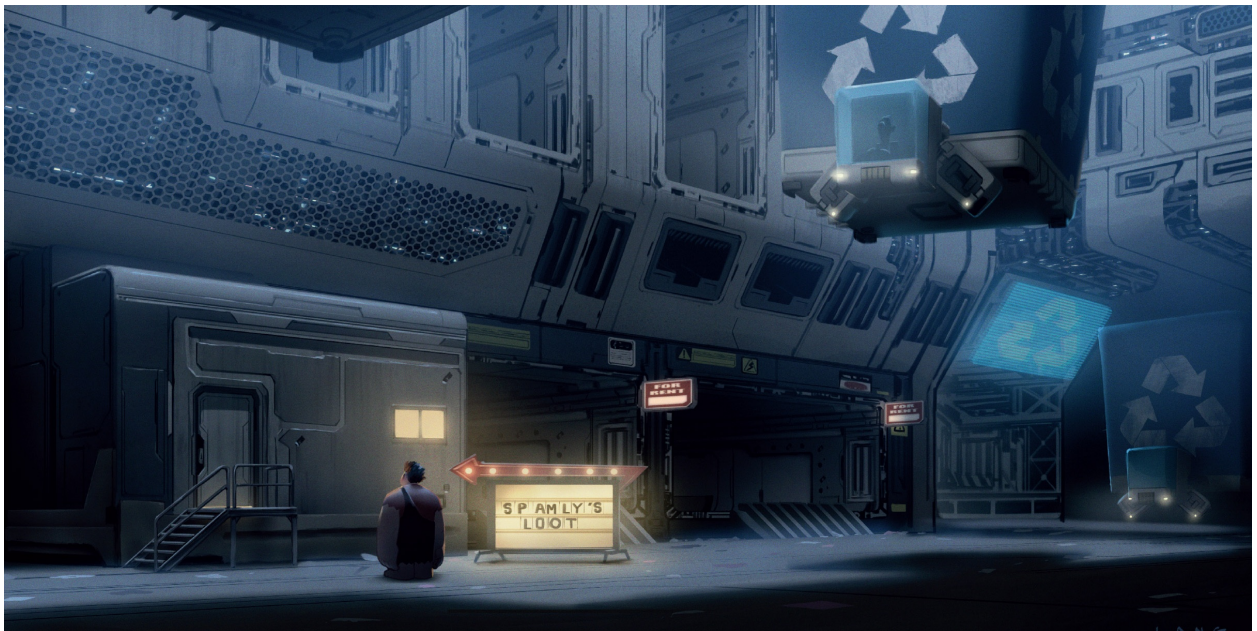
<Ami Thompson / digital>



<Ami Thompson / digital>



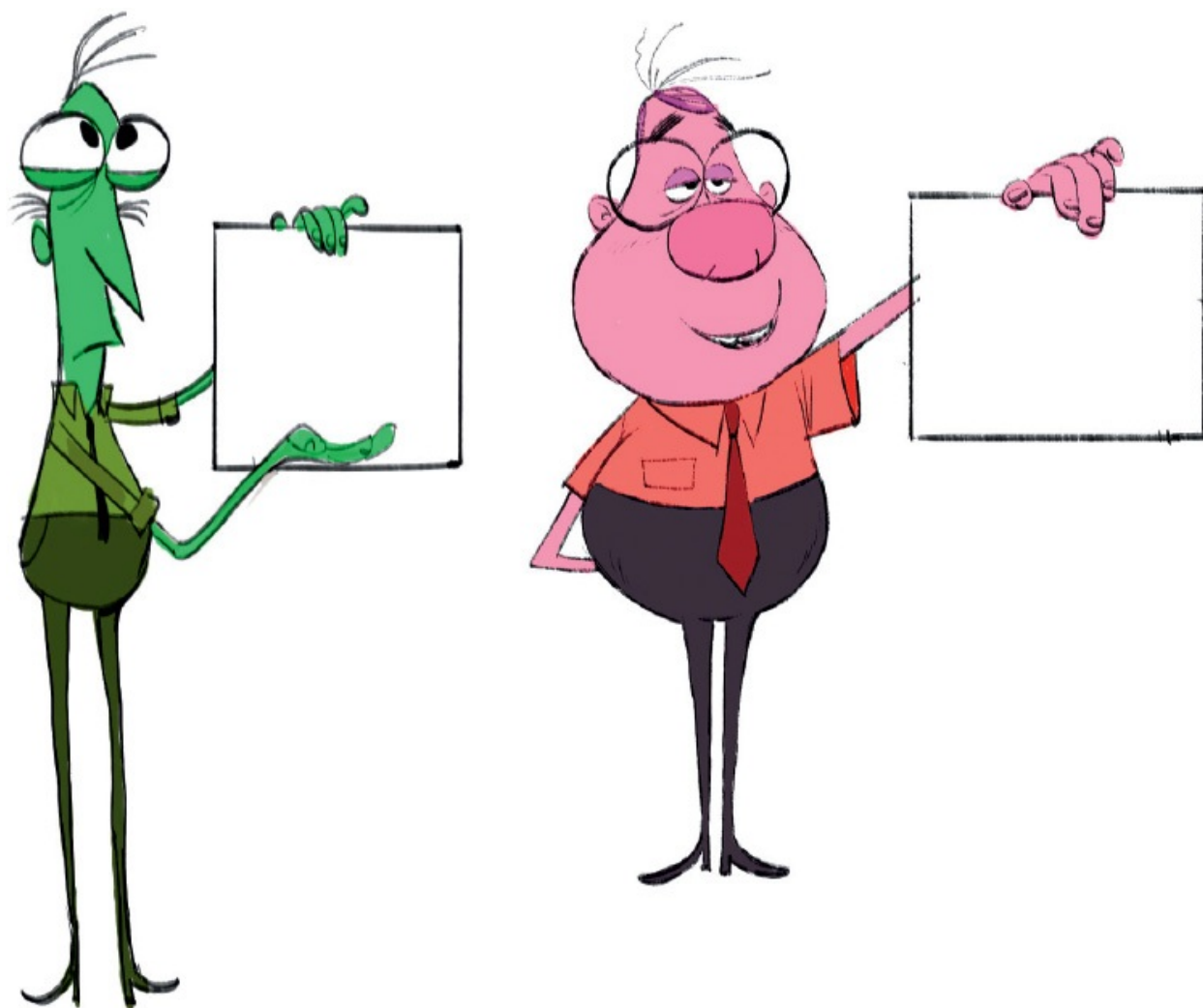
<Ami Thompson / digital>



<Ryan Lang / digital>



<Ryan Lang / digital>



<Cory Loftis / digital>

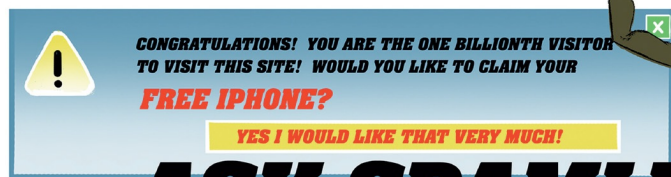
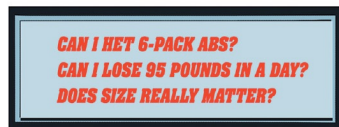


when Rolph + Venelope enter, all of the exterior attachments pop up on the surface

<Kevin Nelson / digital>



<Kevin Nelson / digital>



...ASK SPAMLY



<Kevin Nelson / digital>

DOUBLE DAN



— DOUBLE DAN/DION

<Jeff Merghart / digital>



Cory Loftis  @ProductionDesigner

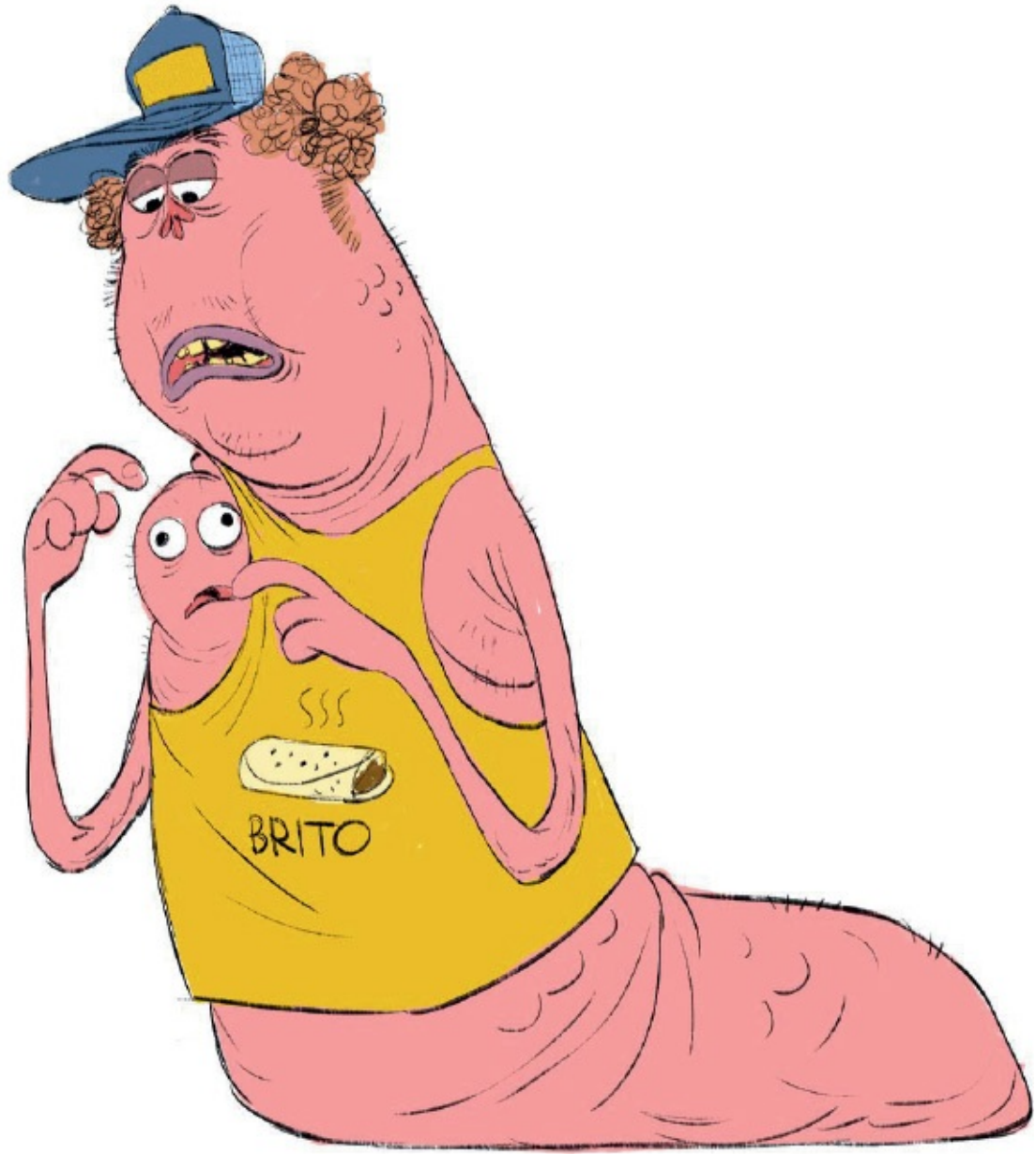


Double Dan is a slug-centaur, with a human upper body and a worm lower body. He's made out of canned meat, even has that slimy aspic around him so he leaves a trail like a slug. In some designs, he has a nonsentient face that lives below his neck, an extra appendage that never grew.

 4

 22

 39



<Cory Loftis / digital>



<Cory Loftis / digital>



<Nicholas Orsi / digital>



<Jeff Merghart / digital>



<Cory Loftis / digital>



<Cory Loftis / digital>



Cory Loftis  @ProductionDesigner



I never intended Double Dan's design to be chosen, I was just trying to gross out the directors while playing around with ideas for the look of the villain. But they loved it! Something gross can still be appealing if you get a sense of personality. Most people know a guy like Dan somewhere.

 16

 9

 26



<Cory Loftis / digital>



<Kevin Nelson / digital>



<Scott Watanabe / digital>



<Scott Watanabe / digital>



<Scott Watanabe / digital>



<Scott Watanabe / digital>



<Scott Watanabe / digital>



<Scott Watanabe / digital>



<Scott Watanabe / digital>



Matthias Lechner  @ArtDirector_Environments

Double Dan's apothecary started as a potion lab but it became more like a proper shop, with boxes and shelves and drawers crammed with dangerous stuff that Dan finds valuable: malware, viruses in leaking canisters, bad code.

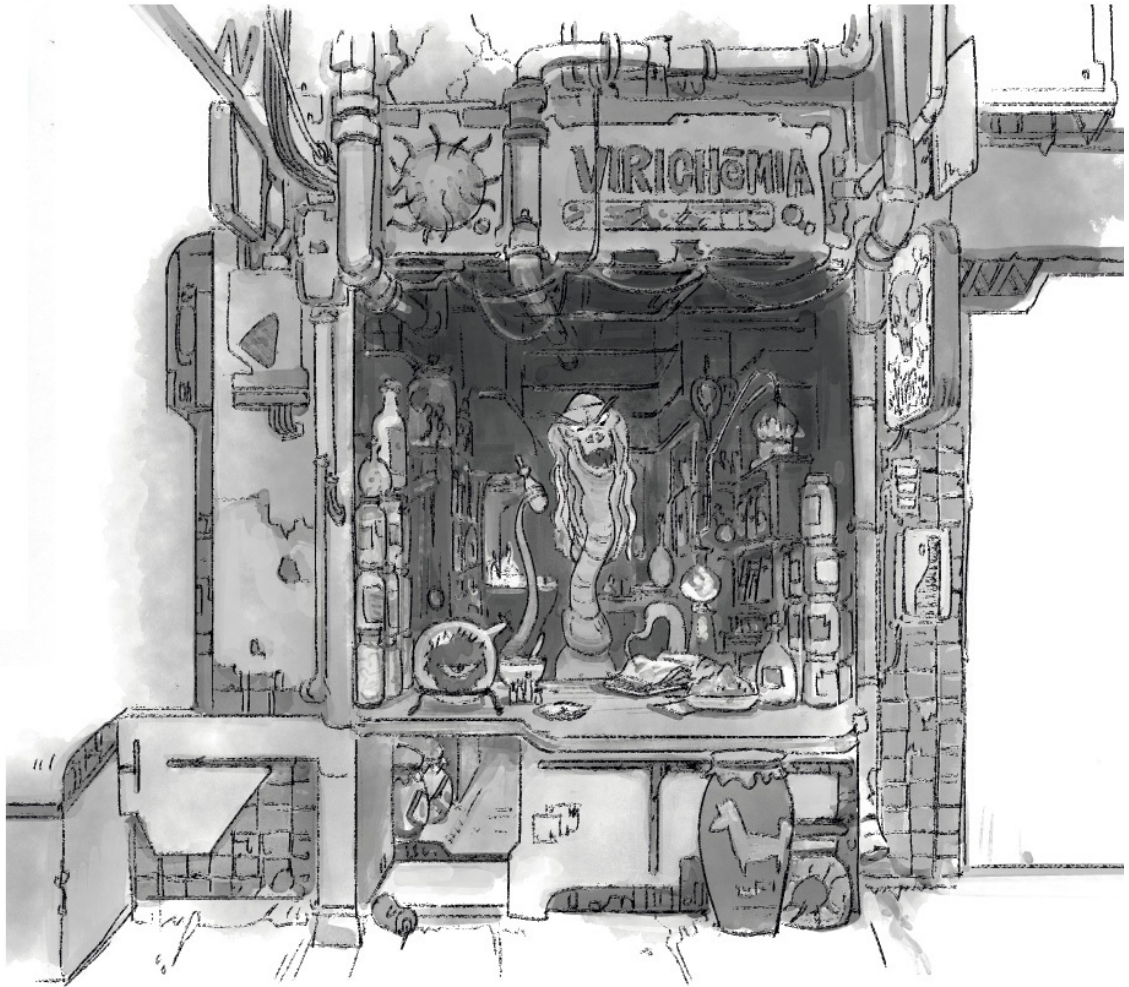
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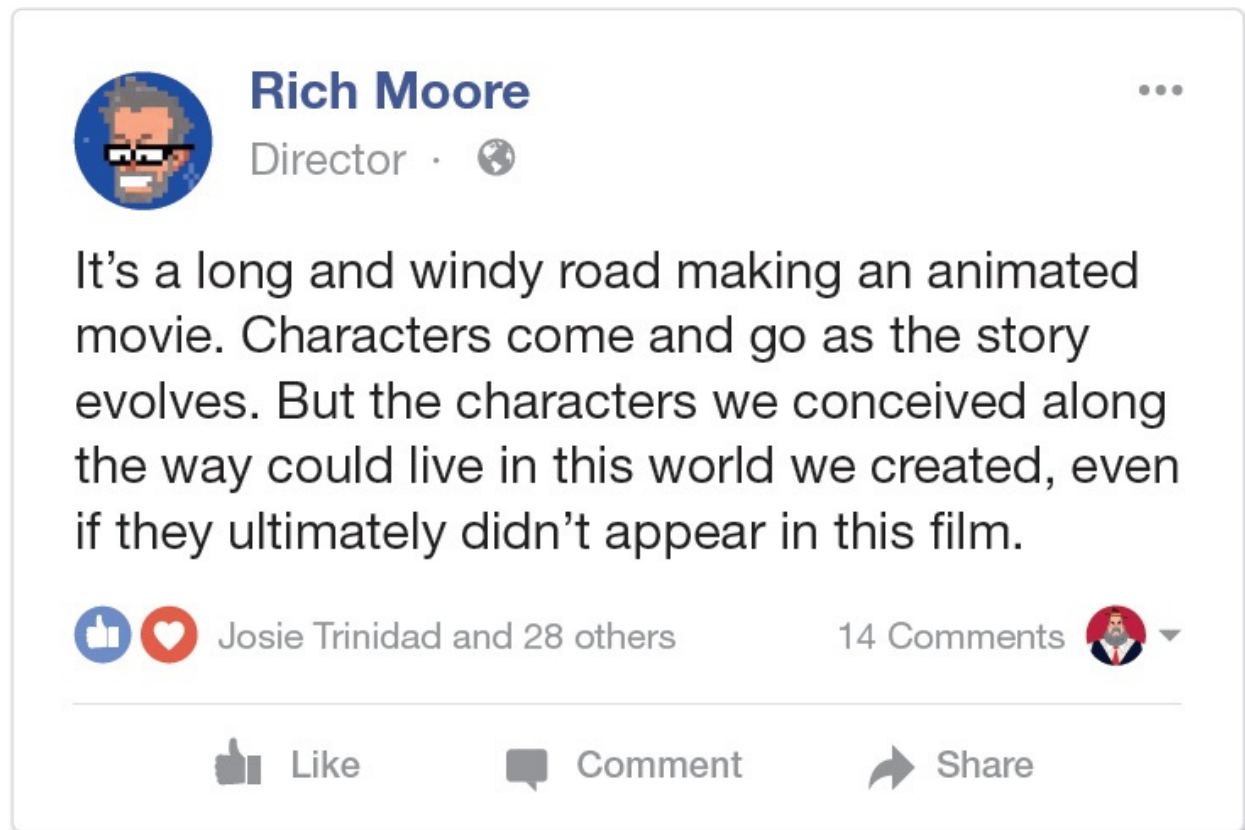


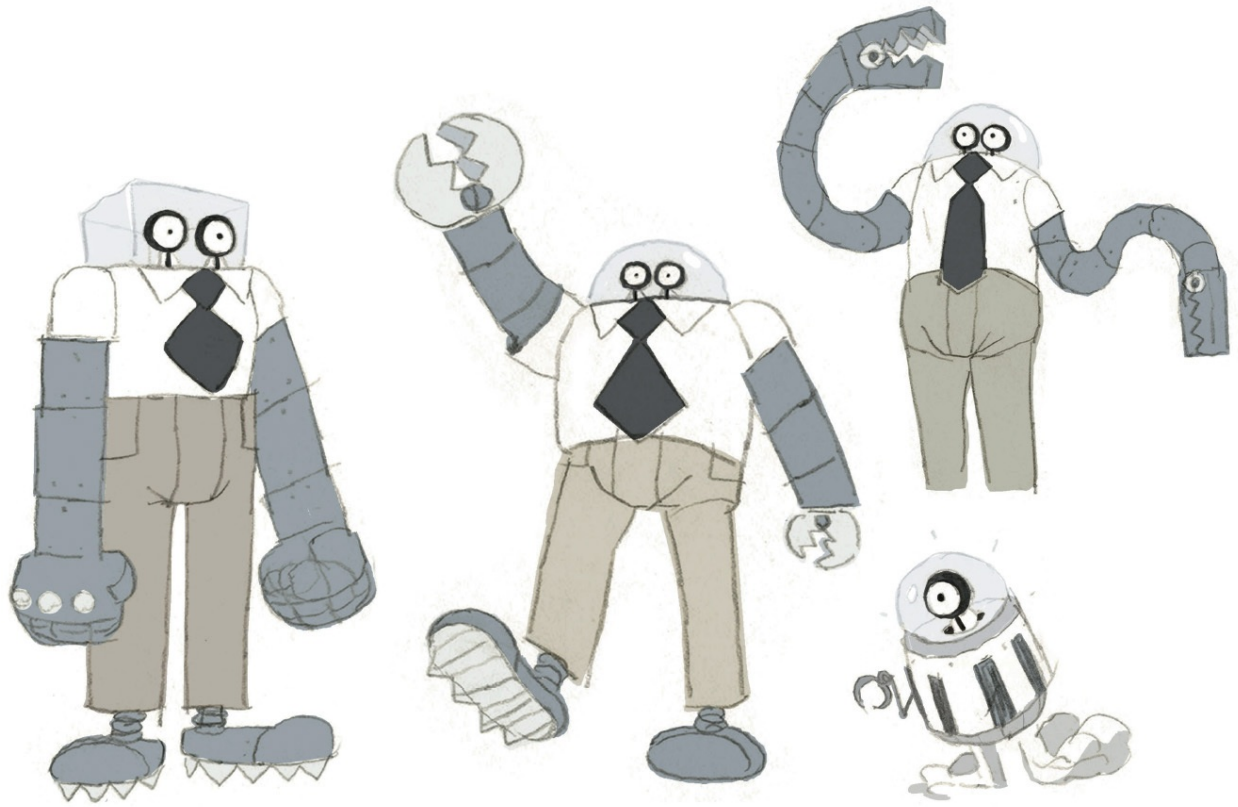
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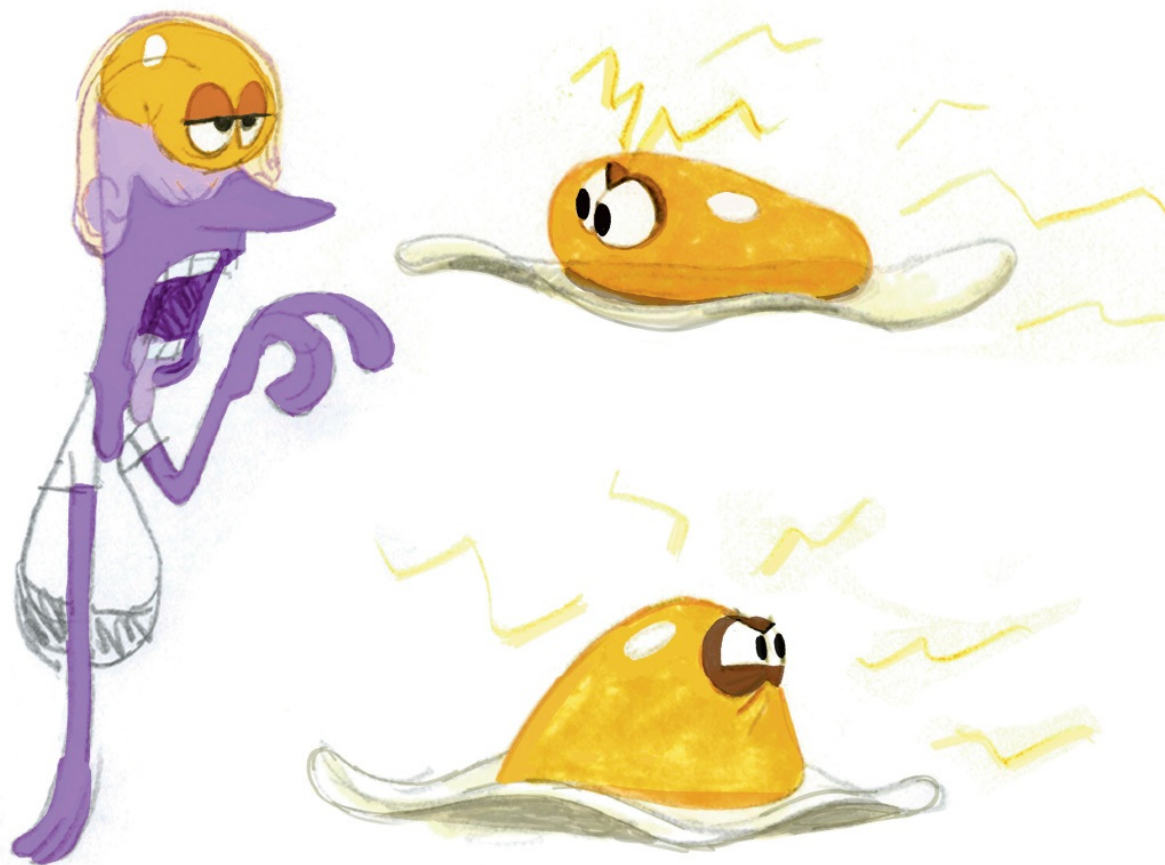
<Scott Watanabe / digital>

ERROR 404





<Nicholas Orsi / digital>



<Nicholas Orsi / digital>



<Nicholas Orsi / digital>



Ami Thompson



Art Director, Characters · 

In early versions of the film, we represented specific viruses from different eras. We didn't make them up; they're all real viruses that we thought had fun names. We designed them to all look unique. Some are realistic, some simple, some cartoony. These characters were fun to explore because of the variety.



Cory Loftis and 16 others

7 Comments



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<Nicholas Orsi / digital>



<Nicholas Orsi / digital>



Nick Orsi



Visual Development Artist · 

There are specific ways data is corrupted, and we designed each virus based on its capability. The I Love You virus is a heart-shaped box that has a monster living inside. The Worm Virus is shaped like a worm. The Creeper is a super creepy guy from the 1970s.



Scott Kersavage and 33 others

14 Comments



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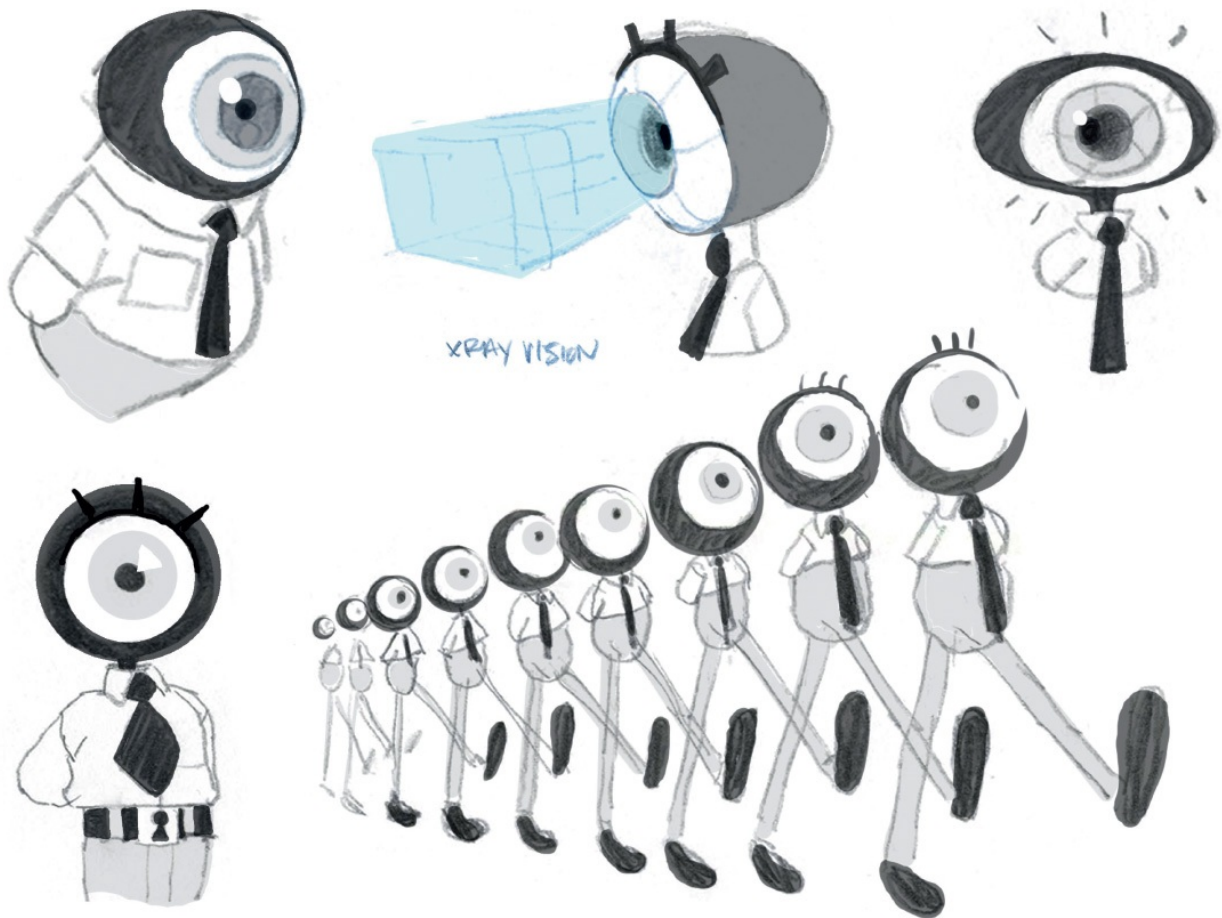
<Nicholas Orsi / digital>



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<Nicholas Orsi / digital>



<Nicholas Orsi / digital>



<Nicholas Orsi / digital>



<Ami Thompson / digital>



Ami Thompson

Art Director, Characters · 🌐



In early versions of the story, there was a villain named BEV—an acronym for Built to Eradicate Viruses. She was the head of an antivirus software program called Interneat. At different times BEV was a deceptively sweet Midwestern lady, a cold, formal militaristic man, and a security guard, simply doing her job keeping the Internet virus-free.



Matthias Lechner and 32 others

15 Comments



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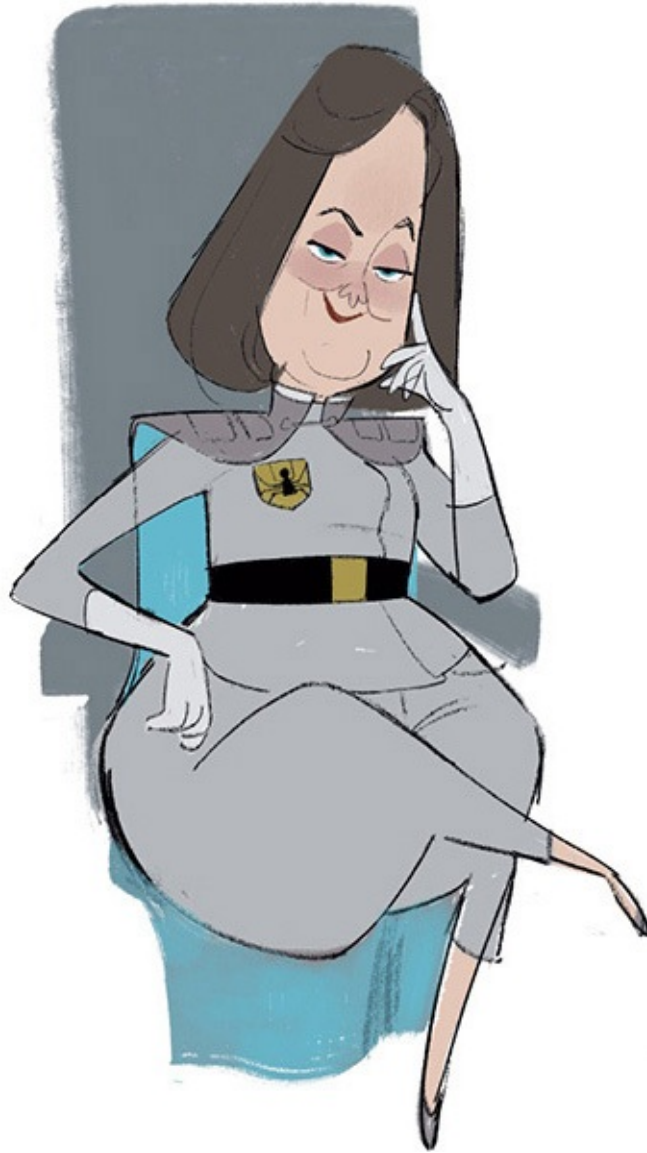
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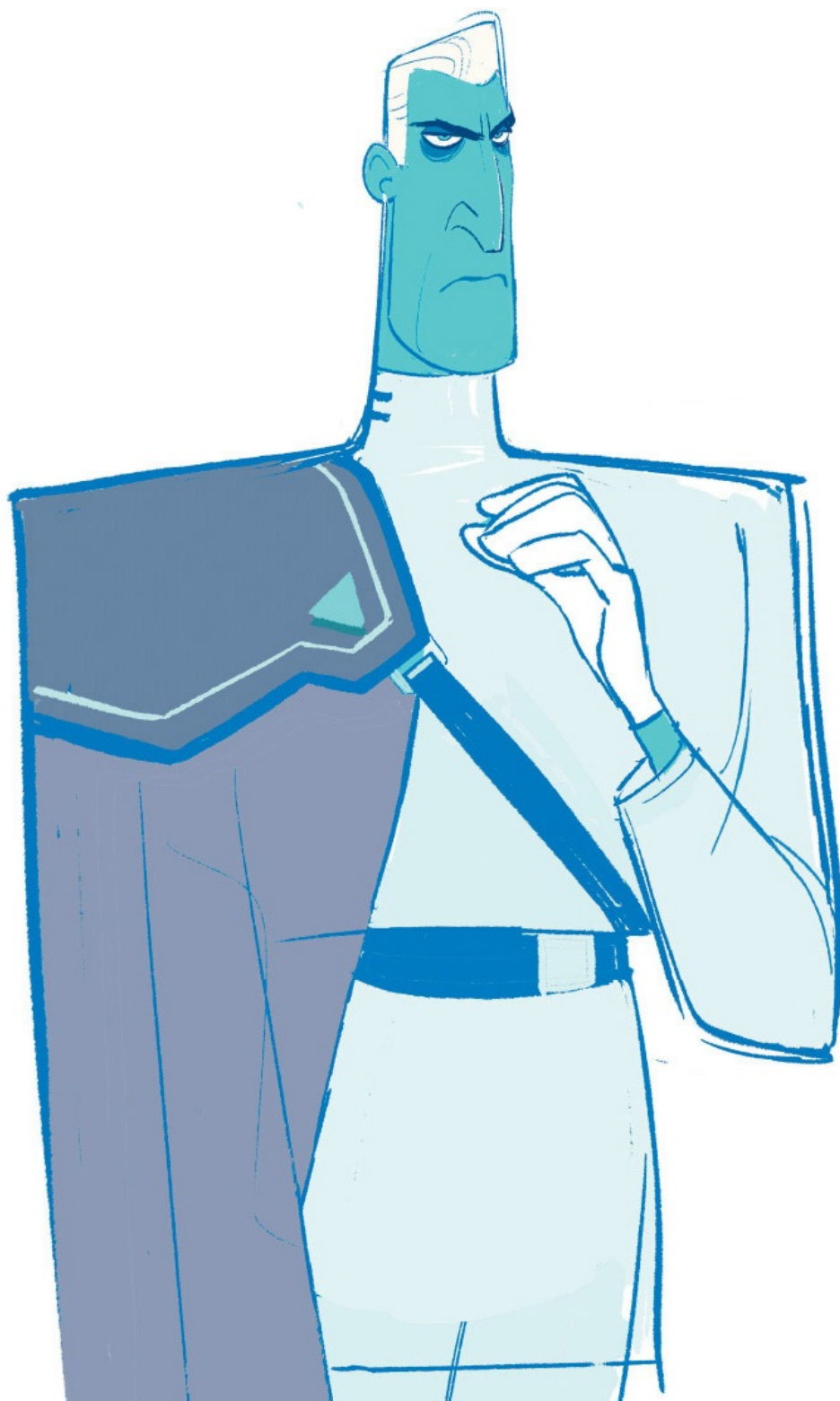
<Cory Loftis / digital>



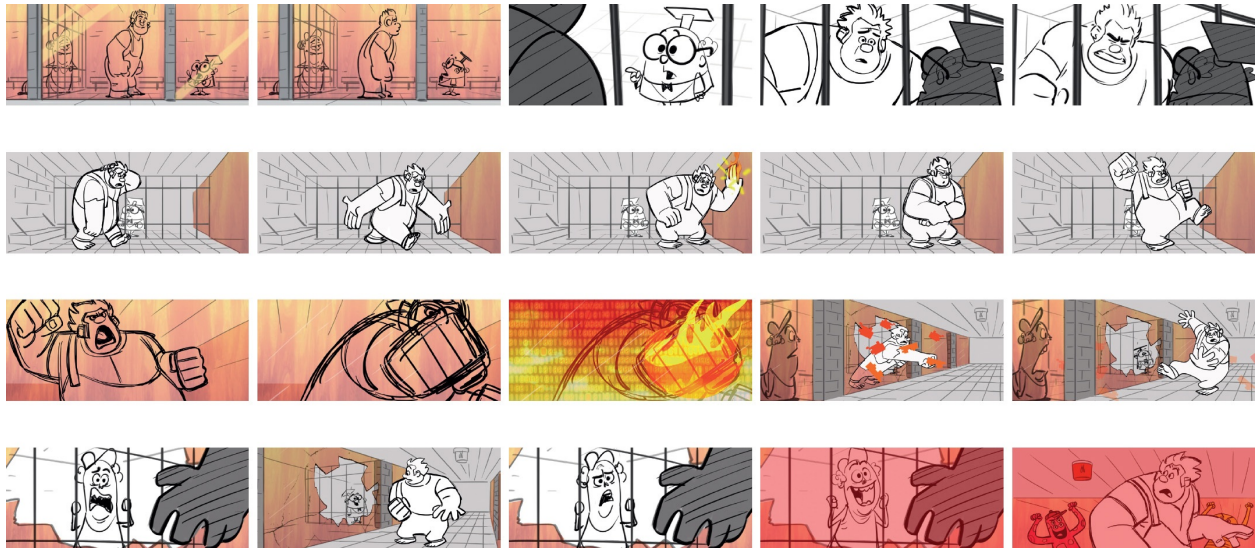
<Ami Thompson / digital>



<Ami Thompson / digital>



<Ami Thompson / digital>



<Bob Scott, Jason Hand / digital>



Matthias Lechner

Art Director, Environments · 🌐



When BEV caught a virus she would send it to quarantine, basically a cell surrounded by a firewall. Instead of a literal wall of fire, it was more like a membrane that became really hot and glowed when touched. If a virus tried to press through it, it broke into flames. In early versions of the story, Ralph was sent to quarantine but because his code is so simple he could break right through the firewall.



Rich Moore and 24 others

7 Comments



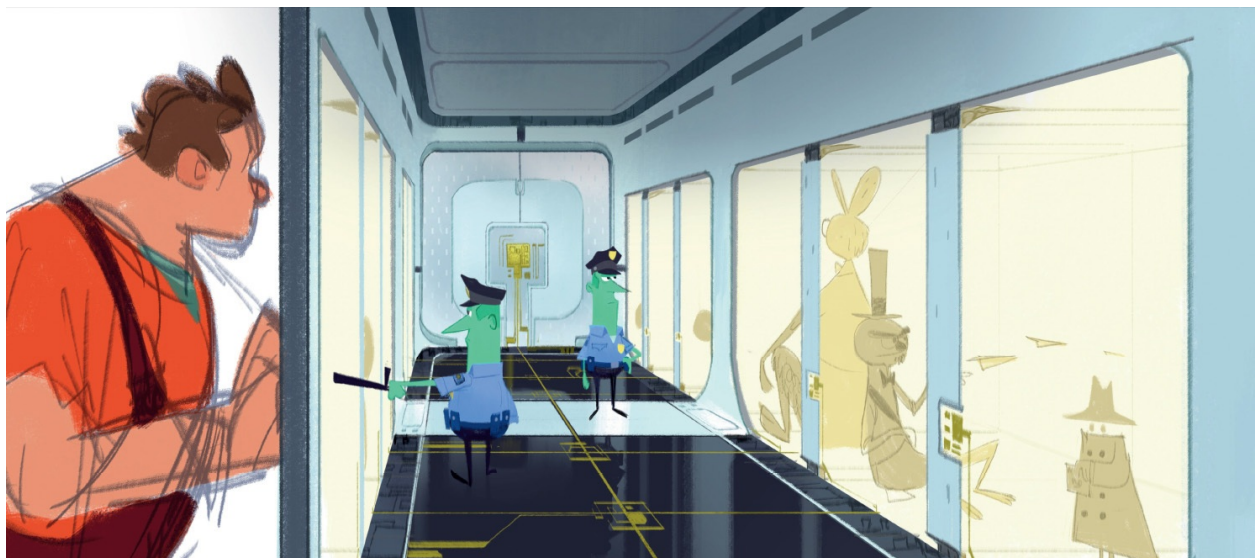
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<Mike Yamada / digital>



<Mac George / digital>



<Matthias Lechner / digital>



<Kevin Nelson / digital>



<Justin Cram / digital>



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<Matthias Lechner / digital>



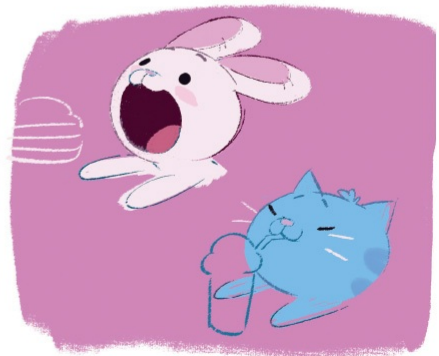
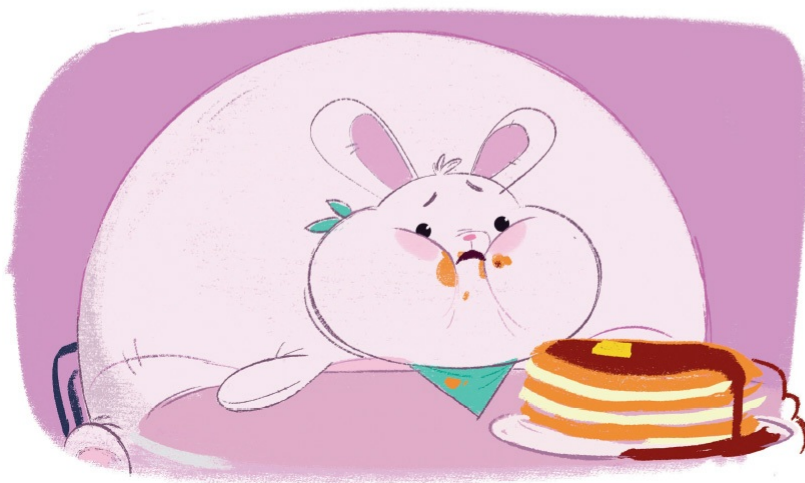
Ami Thompson  @ArtDirector_Characters

Pancake Milkshake is an app game designed for kids. The set is a basic soda shop. The characters, a bunny and a cat, are simple and cute with button eyes and bright, poppy colors like minty green and pink.

 7

 18

 47



PANCAKE ♥
♥ MILKSHAKE

<Ami Thompson / digital>

ACKNOWLEDGMENTS



<Kevin Nelson / digital>



[–] **Jessica Julius** Author It's a privilege to share the story of how *Ralph Breaks the Internet* evolved visually from nascent idea to the beautiful final film. Thank you, Clark Spencer, Rich Moore, and Phil Johnston, for entrusting me with the task.

Cory Loftis, Matthias Lechner, Ami Thompson—you are creative wizards and I am in awe of your talents. You and every artist interviewed for this book has my eternal gratitude for taking the time to sit with me and share your thoughts on your art and process.

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To Mom: Thank you, always and everyways. And to my husband, Shannon: My world would be wrecked without you.

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COLOR KEYS



<Mingjue Helen Chen / digital>



Mingjue Helen Chen, Associate Production Designer

In this film, Ralph and Vanellope travel to many locations, each with its own color story. For example, Litwak's Arcade has more natural lighting, while the Internet is a strong artificial blue.

These specific color profiles help audiences understand where the characters are physically, but also help track Ralph and Vanellope's emotional journeys.





Jessica Julius is director, creative affairs, at Walt Disney Animation Studios. She has over thirteen years of experience in film development and production. She's worked on Disney feature films including the Academy Award®-winning *Zootopia*, *Frozen*, and *Big Hero 6*, as well as on the Academy Award®-nominated films *Moana*, *Wreck-It Ralph*, *Winnie the Pooh*, *Tangled*, *The Princess and the Frog*, and *Bolt*. Jessica is the author of *The Art of Moana*, *The Art of Zootopia*, *The Art of Big Hero 6*, and multiple children's picture books. She lives in Los Angeles.



Rich Moore directed Walt Disney Animation Studios' 2012 Oscar®-nominated feature *Wreck-It Ralph*. A graduate of California Institute of the Arts' (CalArts) renowned Character Animation Program, Moore became one of the original three directors on *The Simpsons*, directing numerous episodes over the series' first five seasons, including the Emmy® Award-winning "Homer vs. Lisa and the Eighth Commandment." He was awarded the 1999 Reuben Award (from the National Cartoonists Society) for Best in Television Animation, the 2001 Hugo Gold Plaque (from the World Science Fiction Society) for Special Achievement in Animation, and the 2002 Emmy® for Outstanding Animated Program (the "Roswell That Ends Well" episode).



Phil Johnston is a feature film and television writer whose first Disney movie was 2012's Oscar®-nominated movie *Wreck-It Ralph*. His screenplay for *Cedar Rapids* was a 2012 Independent Spirit Award nominee for best first screenplay. His projects include a collaboration with Sacha Baron Cohen, *Grimsby*; an adaptation of the Pulitzer Prize-winning novel *A Confederacy of Dunces*; the animated series *My Deer Wife*; and *Harve Karbo*, a television show created alongside Joel and Ethan Coen. Prior to becoming a filmmaker, Johnston was an Emmy® Award-winning broadcast journalist. He holds a BA in journalism from the University of Wisconsin-Madison and an MFA in film from Columbia University. He lives in Los Angeles.



<Various Artists / digital>

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